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AUTHOR	Geske, Terry G.
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ABSTRACT

Potential revenue prospects for the public schools in the Midwest basically depend on the future outlook for the midwestern economy as a whole. Accordingly, a comprehensive analysis is undertaken of the midwestern economy and tax base, and then of trends in educational spending. Topics include: (1) economic growth and taxation systems; (2) demographic and economic trends; (3) federal, state, and local revenue systems; and (4) state education systems in the Midwest, in general and state by state. The latter includes analysis of declining public school enrollments, shifting sources of school revenues, school expenditures, and finance reform. The study concludes that policy-makers in the Midwest will continue to be confronted with difficult decisions regarding trade offs between cutting public services and increasing taxes. Furthermore, revenue-limiting provisions may make it difficult for states to raise sufficient public service revenues. Accordingly, states are likely to place greater pressure on local governments to increase their share of school financing. A 5-page bibliography concludes the study. (TE)

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THE BIG SQUEEZE ON TAX REVENUES FOR THE PUBLIC SCHOOLS:

THE MIDWEST IN THE 1980s

Terry G. Geske
University of Illinois

March, 1983

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THE BIG SQUEEZE ON TAX REVENUES FOR THE PUBLIC SCHOOLS: THE MIDWEST IN THE 1980s

Significant changes are occurring in the intergovernmental relations between the federal government and all state governments. Recently, in an effort to decentralize and deregulate the federal government grant-in-aid system, the Reagan Administration began returning responsibility for a number of governmental services back to the states by consolidating various categorical aid programs into a few major block grants. Along with the block grants, however, came significant reductions in total federal funding. As Lawson and Stenberg (1982) point out in their discussion of a "rebalanced federalism":

> Decentralization under the New Federalism means that states have more discretion in spending the federal funds they receive and that they have greater program responsibility, but the budget cuts mean that there are fewer federal dollars available and greater uncertainty as to who will receive them and how they will be used (p. 30).

It seems clear that these recent changes at the federal level will place additional fiscal pressure on state level governments in the coming years. These changes at the federal level, however, come at a time when state governments themselves are experiencing difficult economic times and are hard pressed for revenues. In addition to slowed economic growth, a number of state and local governments adopted tax revenue and expenditure limitation provisions in the late 1970s which may impact significantly on traditional state-local partnerships in given states for the financing of certain governmental services. Considerable research, for example, is currently being conducted in an attempt to assess the effects of fiscal containment measures, such as Proposition 13 in California and Proposition 2½ in Massachusetts, on state and local governments.

At the same time that major shifts are occurring in basic intergovernmental arrangements, the status of the national economy of the United States makes it almost impossible to predict tax revenues or plan for governmental services with any degree of certainty. Unlike the growth years of the 1950s and 1960s, there have been major economic downturns in the 1970s, and the country's economy during the decade has been characterized as volatile and unpredictable. In the early 1980s, the sluggish United States economy has been plagued by serious inflation, extremely high interest rates, and severe and continuing unemployment. These adverse economic conditions have had more pronounced effects on certain regions and states of the country than on others. Most authorities would agree that it would be extremely hazardous to make long-range revenue projections for the various levels of government based on the radical fluctuations and unexpected events which have occurred over the last decade.

Despite the difficulties involved, this paper attempts to discuss the future revenue prospects for the public schools in the Midwest in the coming decade. The paper begins with a general discussion of economic growth and taxation systems, and then continues with a discussion of the possibilities for economic growth in the Midwest as a whole. Next, the developing demo-

graphic and economic trends affecting economic growth in the midwest region, and thus affecting tax revenues in general, and school revenues in particular, are examined in detail. The impact of these trends, e.g., shifts in population, changes in personal income growth, and the general slowdown in governmental taxing and spending across the country, is considered on both the five Great Lakes states and the seven Plains states.

After examining the significant features of state and local revenue systems, including tax ability and tax effort measures, state education systems are examined for the states involved in this study. This treatment of state education systems includes a discussion of certain trends which clearly have implications for future school funding, e.g., declining public school enrollments, shifting sources of school revenues, and also includes a close look at school revenues and expenditures over the last decade in the midwestern states. The section on state education systems describes the effects of the school finance reform movement on the midwestern states, and also develops individual profiles of the general school finance system used in each of the twelve states included in this study--Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin. The paper concludes with a discussion of overall conclusions and some general estimates of school revenues for each of the twelve states.

During the early 1970s, because of economic growth, the advent of the federal revenue sharing program, and the enactment of state income tax laws, most states in the Midwest had ample available revenue. In fact, in the early 1970s, a number of states had unprecedented revenue surpluses which were used to provide property tax relief and also to reform their school finance systems. During the late 1970s, some of the ground that had been gained in terms of property tax relief and school finance reform was lost, and in sharp contrast to the early 1970s, the economic outlook for the early 1980s does not look good. While state school finance systems still need "reform," it does not seem likely that the necessary revenue will be available. In fact, the short-range revenue prospects for the schools in the Midwest look bleak and the long-range prospects are very difficult to determine.

Economic Growth and Taxation Systems

The general nature of taxation systems is such that tax revenues are always a product of two basic factors--tax rates and tax bases. Thus, the tax revenues that a particular political or taxing jurisdiction can generate, whether it is a country, state, municipality, or school district, will depend both on its willingness to tax itself and on the size of its tax base. To raise additional tax revenues, a taxing jurisdiction would have to increase its tax rate, or expand its tax base, or both. This basic and seemingly simple equation specifying that tax revenue equals tax rate times tax base involves a number of complex and difficult issues. Considerable literature, for example, has been devoted to controversial tax topics such as tax equity, tax burden, tax incident, tax wealth, and tax effort.

Probably the least painful way for a taxing jurisdiction to increase its tax revenues is simply to increase its tax base through economic growth. While a legislative body can increase its tax revenues by increasing its tax rate in accordance with prevailing statutes, or by imposing some new tax,

additional revenues typically are most easily obtained by maintaining the same tax rate, but applying it to an expanding tax base. In economically prosperous times, for example, people earn higher incomes and increase their consumption of economic goods. This increased income and increased consumption serve to expand automatically the fiscal capacity or tax base of a taxing jurisdiction such as a state which relies upon this economic activity for taxing purposes. Thus, a state with this increased tax wealth or ability-to-pay can generate more revenues at the same overall tax rate to provide the agreed upon public services.

During times of sluggish economies and economic recessions, the tax bases of taxing jurisdictions diminish, and this creates a different set of problems in providing public services. A state, for example, now finds that it must increase its overall tax rate or tax effort because of its contracting tax base, or it must reduce public services because of diminishing tax revenues. This latter set of circumstances tends to generate considerable conflict because legislative bodies are forced into making "no win" decisions with regard to which services to cut or which taxes to increase. Regardless of the decisions made, some groups of people are going to lose, that is have less than they had previously.

In the last decade, increasing attention has been focused on the notion of regionalism and the different emerging economic growth patterns across the country. It has become increasingly clear that several different economies, rather than one overall national economy, are at work. It appears that some fundamental economic changes are occurring, and the growing competition among Sunbelt and Frostbelt states for people, capital, and jobs has become more intense. Because of this regional diversity, and these differing regional economies, some states are much more hard pressed than others during periods of slowed economic growth or economic recessions. Energy-rich Sunbelt states such as Louisiana and Texas, for example, fared much better during the economic recession which began in 1980 than did industrial Frostbelt states such as Michigan and Ohio.

There are some significant population shifts occurring across the country, and these population shifts create changes in personal income levels, in employment opportunities, and in the magnitude of various economic activities for a given region. As a result, there are sharply different economic growth rates across the country with some regions or areas growing more rapidly than others. Because regions with considerably different growth rates will naturally have different economic policy interests at heart, they often come into conflict as they compete for industrial growth and capital formation which are key elements in any economy. During the 1970s, for example, there was a considerable out-migration of people from the industrial Midwest which resulted in substantial industrial expansion in the South and Southwest. Because of these shifts in population and income, along with the accompanying growth in taxable economic activity, the tax base of the South and Southwest is growing and expanding, while the tax base of the much slower growing midwest area is diminishing and contracting.

Since these patterns of fast growth and slow growth have a tendency to accelerate and become self-perpetuating, several policymakers in the Midwest have voiced some significant concerns. The most obvious concern has to do

with the capability of the energy rich states to export their taxes to the "have not" states. There is a growing concern that the energy-rich states will use exportable severance taxes on gas, oil, and coal to replace their income, sales, and property taxes. There is also a concern that the Federal government and its taxing and spending policies do little to mitigate these growing regional disparities. In fact, many believe that Reagan's "New Federalism" and economic policies including trickle-down economies, governmental deregulation, more power to the states, and the like, will actually serve to magnify the economic differences among the regions of the country.

Given the important role that economic growth plays in generating tax revenues, the increased emphasis on regional economic competition, and the concern over the federal government's taxing and spending policies, the remainder of this section is devoted to an exploration of the overall future prospects for the midwest economy, and a consideration of the impact of the flow of federal dollars on the midwest region.

Economic Prospects for the Midwest Region

As a region, the Midwest has significant natural resources, including the rich land itself, abundant fresh water, and even large deposits of energy resources such as coal, oil shale, and biomass. At the same time, the region has a large industrial base and a highly skilled labor force. A number of the states in the Midwest, particularly those in the Great Lakes area, are leading states in both agriculture and manufacturing. In the late 1970s, for example, Illinois' export sales approached $10 billion, and was one of the top three states in manufacturing, agricultural, and total exports. Similarly, Ohio, a leading industrial state, ranked in the top five states in the total value of manufactured products. As part of the midwestern corn belt, Ohio's economy also depends on large crops of corn, soybeans, and wheat. Indiana is also one of ten leading states in farming and manufacturing, and Wisconsin, although known as "America's Dairyland," is also an important industrial state which recently ranked 11th in the nation in the value of manufactured products. Michigan has some farming, but basically relies on the automobile industry for its economic well-being.

The emerging reality of continued slower economic growth, combined with the demographic and economic trends which have occurred over the last decade, will continue to have an adverse affect on the manufacturing and industrial base in the Midwest, primarily in the Great Lakes area. Experts expect the economic sector involving services and finance to grow fairly rapidly in the coming decade, but they forcast that industry will experience very little or almost no growth during this period. In addition, recent investments in new capital have been relatively low in the Midwest, and even low in potentially high growth sectors such as in high technology areas. Several state governments, however, are currently devising package programs and incentive plans to encourage capital investments and the establishment of high technology firms in their states.

A number of midwestern states are moving rapidly to attract high technology industries in an effort to promote economic growth. In late 1981, for example, Governor Milliken in Michigan announced a plan to promote growth of the high technology sector in his state's economy. His plan calls for Michi-

gan to become the center for robotics, and the State has allocated funds to the University of Michigan to establish such a center, and also to other state universities to conduct research and teaching on industrial development and applications, technology-based innovations, retraining programs, and the like. A short time later, in early 1982, a governor's task force in Illinois recommended that the legislature appropriate $10 million for each of the next three years to establish technical centers or parks to stimulate growth of high technology firms. To capitalize on this rapidly expanding area, the task force recommended that the State develop a network of high technology facilities associated with major univerisities throughout Illinois to merge and take advantage of expert talent and sophisticated equipment. The task force recommended the following four areas of specialization for Illinois: electronics, coal-utilization technology, automated manufacturing, and genetic engineering.

While future economic growth will be influenced by the ability of the midwestern states to attract new high technology industries, future growth will also be affected by new agricultural policies as well. The Midwest contains the richest farm soil in the world, and the region serves as the breadbasket of the world. The states of Illinois and Iowa, for example, typically compete with each other to become the country's leading corn producer. Furthermore, Iowa recently ranked second only to California in the total value of crops and livestock, and second only to Texas as the leader in beef cattle production. The states of Kansas, North Dakota, and Nebraska are also known for wheat production, beef cattle production, and farming. At the same time, the economy of the states of both North Dakota and South Dakota depend very heavily on farming. In both states, agriculture products account for nearly 80 percent of the total value of goods produced, and neither state has any large manufacturing industries to encourage or promote economic growth. What little industry does exist, for the most part, relates to farm products. Agriculture is a key economic factor in the Midwest, and agricultural policies such as federal price support programs and foreign trade agreements will play an important role in the future economic growth of this sector in the region. At the same time, it should be remembered that agriculture is expected to decline over the next decade in terms of its relative importance as an industry.

The abundant water supply in the Midwest, including the Great Lakes, significant river chains, and ground water, not only facilitate the region's agricultural and manufacturing activities, but also provides a valuable and relatively inexpensive transportation system. The Mississippi River, for example, plays an important role in the economic activity of those midwestern states for which it forms a portion of their geographical borders: Illinois, Iowa, Minnesota, Missouri, and Wisconsin. The State of Missouri, with the Missouri River bisecting the State from west to east, serves as a hub of one of the nation's transportation networks. In addition, the opening of the Port of Indiana on Lake Michigan in 1970 contributed to Indiana's economic development due to greater accessibility to the St. Lawrence Seaway system. This strong water transportation system is a crucial factor in the shipping of coal and grain, for example, particularly into export markets, and it is important that this water system be supported and maintained by the midwestern states in the coming years.

Finally, another important strength, some midwestern states contain certain energy resources, such as coal and coal shale, which potentially could contribute significantly to the region's future economic growth. The State of North Dakota, for example, has the largest lignite coal reserves in the country, and petroleum is its most valuable mineral. Unfortunately, extensive deposits of coal and coal shale in Illinois and Ohio, however, are difficult to mine and have a high sulfur content which severely limits their use, but future technology may help overcome or eliminate some of the problems involved. In addition, oil and gas wells dot the landscape in Kansas. Despite the deposits of energy resources, however, the midwest region will continue to be an energy-importing area and subject to the tax policies of the energy wealthy regions.

The Flow of Federal Dollars to the Midwest Region

In the Midwest, the Great Lakes area receives the lowest return of any region in the country on the tax dollars that it sends to the federal government. The data in Table 1 present ratios of federal funds distributed for each dollar of federal taxes paid, by regions, and by midwestern states from 1952 to 1976. For the fiscal period 1974-76, the ratio for the Great Lakes states was .74, whereas the ratio for the Plains states was a much more favorable .98. The ratios for the more rapidly growing areas of the country--the Southeast, Southwest, Rocky Mountain and Far West--were 1.14, 1.05, 1.10, and 1.13, respectively. These data in Table 1 also disclose a pattern of narrowing ratios across different regions over time. Nevertheless, the relative disparities in these ratios for the different regions have remained basically unchanged since 1976, and there is some real concern that Reagan's "New Federalism" may contribute to an increase in these differences once again (Schoeplein, 1981).

Currently, there is a significant flow of federal dollars away from states and regions which are experiencing the most severe economic difficulties, and toward those which are experiencing the greatest population gains, the highest growth rates of per capita personal income, and the lowest rates of unemployment. Others point out that these federal outlays are flowing to states which historically have maintained low tax burdens for their own citizens. The adverse impact on the midwestern states of these shifts in population and per capita income, which will be examined in more detail shortly, are reinforced by the distribution and flow of federal dollars across the country. At the same time, the Reagan administration's policy of increased federal spending for defense will have a negative effect, since the Midwest receives a very small portion of defense contracts compared to the other regions of the country.

Demographic and Economic Trends Affecting the Midwest

Some fundamental demographic and economic changes are occurring with regard to population, personal incomes, and governmental taxing and spending in the midwestern states. Significant changes occurred during the 1970s, and the rate of these changes appeared to be accelerating throughout the latter 1970s. For the most part, these changes are seriously affecting the ability of the midwestern states to generate tax revenues. These changes with regard to population, personal income, and governmental taxing and spending are con-

TABLE 1

RATIO OF FEDERAL FUNDS DISTRIBUTED FOR EACH DOLLAR OF FEDERAL TAXES PAID, BY REGIONS, AND BY MIDWESTERN STATES, SELECTED FISCAL YEARS 1952-1976

REGION OR STATE	1974-76	1969-71	1965-67	1959-61	1952
UNITED STATES			100		
GREAT LAKES	.74	.68	.64	.74	.87
Illinois	.70	.63	.59	.75	.69
Indiana	.74	.81	.75	.85	1.34
Michigan	.76	.61	.58	.65	.87
Ohio	.76	.75	.70	.79	.95
Wisconsin	.76	.71	.67	.69	.85
PLAINS	.98	1.01	1.15	1.00	1.20
Iowa	.81	.83	1.00	.81	1.05
Kansas	.96	1.14	1.44	1.62	1.73
Minnesota	.87	.89	.93	.74	1.26
Missouri	1.12	1.10	1.09	.92	1.01
Nebraska	.91	.91	1.26	1.09	1.12
North Dakota	1.32	1.51	2.04	1.29	1.56
South Dakota	1.33	1.26	1.67	1.60	1.52
NEW ENGLAND	1.01	.95	.95	1.07	.78
MIDEAST	.99	.89	.75	.83	.75
SOUTHEAST	1.14	1.24	1.36	1.29	1.51
SOUTHWEST	1.05	1.32	1.37	1.24	1.46
ROCKY MOUNTAIN	1.10	1.23	1.34	1.24	1.20
FAR WEST	1.13	1.18	1.27	1.16	1.12

Source: Advisory Commission on Intergovernmental Relations, M-123, October, 1980, Table 12, p. 17.

sidered in the remainder of this section. Before examining these trends in detail, however, certain selected characteristics of the midwestern states are briefly highlighted to indicate the vast differences which exist across these states.

Selected characteristics for the midwestern states including population statistics, per capita income figures, and per capita general revenue and expenditure data for state and local governments are presented in Table 2. In terms of population alone, these states vary in size from Illinois and Ohio with 11.4 and 10.8 million people, respectively, to South Dakota and North Dakota with 653,000 and 690,000, respectively. A wealthier state, Illinois, had the highest 1980 per capita income, $10,521, whereas South Dakota had the lowest, $7,806. In addition to Illinois, three other states, Kansas ($9,983), Michigan ($9,950), and Minnesota ($9,724) had 1980 per capita income above the national average ($9,514). Based on per capita general revenue of state and local governments, three midwestern states--Michigan ($1,750), Minnesota ($1,805), and Wisconsin ($1,679)--were considerably above the national average ($1,560). As expected, then, these same three high spending states were considerably above the national average for per capita direct general expenditure of state and local governments as well. At the other end of the continuum, low per capita general revenue, as well as low per capita expenditure states in the Midwest, included Indiana, Missouri, and Ohio. Probably the most basic observation that can be made about the midwestern states is that there is pronounced variation across the major features of these states, and that it is very difficult to generalize across any of them.

Population Trends

The total population for the United States increased by 23.4 million people during the 1970s, resulting in a national average growth of 11.4 percent for the states from 1970 to 1980. There was tremendous variation in population growth across regions of the country and across states within regions. The shift in population growth from the midwestern and northeastern states to the western and southern states continued throughout the 1970s. During the decade, however, this shift in population became much more pronounced than in previous decades, and appears to have even accelerated during the latter 1970s. This shift in population away from the older industrialized states to the West and South is expected to continue during the 1980s.

Table 3 depicts regional population growth for the United States by percentage change for 1960-70, and 1970-80, and also presents the percentage change for the midwestern states during these time periods. The growth in total population for the entire country, for example, was 13.4 percent for 1960-70, and 11.4 percent for 1970-80. Both the North Central and Northeast regions recorded population gains considerably below the gains made by the rest of the country as measured by percentage change. The South and West, however, have recorded population gains considerably above the national average growth rates. For the 1970s, for example, the North Central and Northeast regions gained 3.9 and 0.2 percent population, respectively, while the South and West gained 19.1 and 22.7 percent, respectively.

While variation exists across the Great Lakes and Plains subregions, as well as within the subregions themselves, all midwestern states have lagged

TABLE 2

SELECTED CHARACTERISTICS OF MIDWESTERN STATES

STATE	Population 1980 ('000)	Per Capita Income 1980	General Revenue Per Capita 1978/79	Direct General Expenditure Per Capita 1978/79
Illinois	11,418	$10,521	$1,522	$1,439
Indiana	5,490	8,936	1,232	1,122
Iowa	2,913	9,358	1,463	1,478
Kansas	2,363	9,983	1,452	1,399
Michigan	9,258	9,950	1,750	1,671
Minnesota	4,077	9,724	1,805	1,651
Missouri	4,917	8,982	1,213	1,129
Nebraska	1,570	9,365	1,528	1,413
North Dakota	653	8,747	1,596	1,571
Ohio	10,797	9,462	1,296	1,294
South Dakota	690	7,806	1,424	1,434
Wisconsin	4,705	9,348	1,679	1,616
All States	226,505	9,514	1,560	1,481

Note: Columns 3 and 4 -- General Revenue and Direct General Expenditure Per Capita for state and local governments, 1978-79.

Source: Columns 1, 3, and 4 from Advisory Commission on Intergovernmental Relations, M-132, December, 1981, Section II, State Profiles, pp. 98-197; Column 2 from U. S. Bureau of the Census, GF81, No. 1, January, 1982, Table 7, p. 11.

TABLE 3

REGIONAL POPULATION, BY PERCENT CHANGE, AND FOR MIDWESTERN STATES, BY PERCENT CHANGE, 1960-1980

	1960-70	1970-80	1970-75	1975-80
UNITED STATES	13.4	11.4	6.0	5.1
NORTH CENTRAL	9.4	3.9	2.2	1.7
Great Lakes				
Illinois	10.2	2.8	1.8	1.0
Indiana	11.4	5.4	3.0	2.3
Michigan	13.5	4.2	2.5	1.6
Ohio	9.3	1.3	1.1	0.3
Wisconsin	11.8	6.5	3.4	3.0
Plains				
Iowa	2.5	3.1	2.0	1.1
Kansas	3.2	5.1	1.3	3.7
Minnesota	11.5	7.1	3.2	3.8
Missouri	8.3	5.1	2.5	2.5
Nebraska	5.2	5.7	3.8	1.9
North Dakota	- 2.3	5.6	3.2	2.4
South Dakota	- 2.1	3.6	2.3	1.3
NORTHEAST	9.6	0.2	0.8	- 0.6
SOUTH	13.8	19.1	10.8	8.3
WEST	21.4	22.7	10.8	11.9

Source: U. S. Bureau of the Census. population reports for various decades; U. S. Bureau of the Census, Preliminary Estimates of Intercensal Population for the States, 1981.

considerably behind the national average growth rate of 13.4 percent since 1970. In the Great Lakes subregion, the most populous states, Ohio, Illinois, and Michigan, are experiencing the slowest population growth. Ohio's population, for example, increased 1.1 percent from 1970 to 1975, and only 0.3 percent from 1975 to 1980. Similarly, Illinois and Michigan recorded increases of 1.8 and 2.5 percent, and 1.0 and 1.6 percent, respectively, for these same time periods. Wisconsin, the least populous state, had the greatest increases of 3.4 and 3.0 percent. The population growth trends in the Plains subregion are not as clear cut as in the Great Lakes area. Minnesota and Kansas, for example, both experienced higher growth for the latter 1970s than in the early 1970s, and Missouri's growth was constant throughout the decade. In addition, North and South Dakota both gained population during the 1970s, whereas both had experienced losses during the previous decade.

This shifting or redistribution in population growth across regions in the country is directly related to two factors--natural increase and net migration. Natural increase (the number of births minus the number of deaths) peaked around 1960, and since then, fertility rates have continued to decline across the country for all regions. The midwestern states have had consistently lower rates of natural increase than the national average rates or than the rates in either the South or West for the last fifteen years. Because of the declining national fertility rate, and the corresponding decline in natural increase, the other component of population changes--migration--has become an important consideration during the last two decades. The Northeast and North Central regions were the only two to experience net out-migration during the 1970s. The percentage of net out-migration increased (from -1.7 to -2.0 percent) for the Northeast region, but decreased (from -1.6 to -1.2 percent) for the North Central region from the first half to the last half of the decade (U.S. Bureau of the Census, Current Population Reports, Series P-25, No. 640, November 1976, and No. 876, February 1980).

There are some marked differences in the North Central region between the Great Lakes and Plains states in terms of natural increase and migration factors when the data are disaggregated. Table 4 presents the population change for the midwestern states by natural increase and by net migration from 1970 to 1979. For the United States as a whole, natural increase accounted for a population change of 7,301,000 or a 3.6 percent increase, and in terms of migration, 2,448,000 people moved, or 1.2 percent of the population, from 1970 to 1975. Again, for the country, comparable figures were 5,466,000, 2.6 percent, for natural increase, and 1,582,000, .7 percent, for migration, from 1975 to 1979.

In contrasting the Great Lakes and Plains states, the disparity between the two subregions in average rates of natural increase (3.7 and 2.9 percent for 1970 to 1975, and 2.6 and 2.4 percent for 1975 to 1979) substantially diminished over the decade. In addition, the percentage rate of natural increase in each Plains state, except Iowa and Missouri, was higher than the average rate (2.6 percent) for the Great Lakes states during the latter 1970s. Furthermore, the net out-migration problem was much more prevalent in the Great Lakes subregion with each state, except Wisconsin, registering losses, but in the Plains subregion a number of states such as Minnesota, Nebraska, and Kansas were gaining population because of net in-migration.

TABLE 4

POPULATION CHANGE BY NATURAL INCREASE AND BY NET MIGRATION
FOR THE MIDWESTERN STATES, 1970-1975 AND 1975-1979

	POPULATION CHANGE 1970-1975 (in thousands)				POPULATION CHANGE 1975-1979 (in thousands			
	Nat. Inc.		Net Mig.		Nat. Inc.		Net Mig.	
	(no.)	(%)	(no.)	(%)	(no.)	(%)	(no.)	(%)
UNITED STATES	7301	3.6	2448	1.2	5446	2.6	1582	0.7
GREAT LAKES STATES	1609	3.7	-790	-2.0	1136	2.6	-625	-1.6
Illinois	377	3.4	-309	-2.8	284	2.5	-233	-2.1
Indiana	210	4.0	- 93	-1.8	145	2.7	- 56	-1.1
Michigan	379	4.3	-168	-1.9	248	2.7	-132	-1.5
Ohio	384	3.6	-314	-2.9	254	2.4	-251	-2.3
Wisconsin	141	3.2	43	1.0	109	2.4	9	0.2
PLAINS STATES	473	2.9	- 57	-0.4	409	2.4	- 33	-0.2
Iowa	68	2.4	- 21	-0.8	65	2.3	- 35	-1.2
Kansas	63	2.8	- 25	-1.1	61	2.7	38	1.1
Minnesota	130	3.4	--	--	107	2.7	16	0.4
Missouri	115	2.5	- 14	-0.3	90	1.9	- 1	--
Nebraska	50	3.4	13	0.9	41	2.7	21	0.9
North Dakota	24	3.9	- 2	-0.4	23	3.6	- 6	-0.9
South Dakota	24	3.6	- 8	-1.2	22	3.2	- 15	-2.2

Source: U. S. Bureau of the Census, Current Population Reports, Series P-25, No. 876, February 1980.

Personal Income

Growth in personal income is a key determinant of a state's economic growth and its ability to raise tax revenues. Historically, the older industrialized states in the Northeast and Mideast have always been considered wealthy in terms of personal income. Over the past 50 years, however, there has been a gradual equalization of growth rates in personal income across the different regions of the country. In the early 1930s, for example, per capita incomes in the Mideast and New England were about three times the size of per capita in the Southeast. By the late 1970s, per capita incomes in these wealthy areas were less than 25 percent greater than per capita income in the Southeast. While a ranking of the different regions in terms of per capita incomes would remain basically unchanged today, the wealthy regions, including the Great Lakes region, have become relatively less rich over the decades, whereas the less wealthy regions have become less poor.

The data in Table 5 displays per capita state personal income as a percentage of the U.S. average, by regions, and by midwestern states for the past 50 years. Per capita personal income as a percentage of the U.S. average for the midwestern states has declined moderately in the Great Lakes states from 109 to 102 percent from 1929 to 1980, but has increased significantly for the Plains states from 76 to 94 percent for this same time period. The decline in per capita income relative to the U.S. average was much more pronounced in the Mideast and New England regions than in the Great Lakes region. On the other hand, the increase in per capita income was much more rapid in the Southeast and Southwest regions than in the Plains region.

At the same time, there is considerable variation in changes in per capita income relative to the U.S. average within the Great Lakes and Plains regions. The declining Great Lakes region is marked with less variation, with Illinois experiencing the most dramatic decline, followed by Ohio and Michigan. Over the years, Indiana has actually registered an increase in per capita income, whereas Wisconsin has remained relatively stable compared with the rest of the country. For the expanding Plains region, Kansas and North Dakota have experienced the largest gains in per capita income, whereas Missouri and Nebraska have registered the smallest gains when compared with the U.S. average. In addition, both North Dakota and South Dakota have been subject to sporatic and uneven changes in per capita income levels.

The country was plagued with three economic downturns or recessions during the tumultuous 1970s, one each at the beginning (1970), middle (1975), and end (1980) of the decade. The previously described convergence in growth rates of personal income across the different regions of the country appears to have accelerated in the latter 1970s. These economic recessions have exerted a disproportionably negative effect on personal income growth in the northeast and midwest regions when compared with other regions of the country. During economic recessions, total personal income continues to increase but at a slower rate, and this serves to increase even more the disparities in the relative rates of growth in personal income across the regions.

The data in Table 6 present the rates of growth of total personal income, by regions, and by midwestern states for 1960 to 1977. During the 1960s, the Great Lakes states as a whole displayed a growth rate which was 91 percent of

TABLE 5

PER CAPITA STATE PERSONAL INCOME AS A PERCENTAGE OF THE U.S. AVERAGE, BY REGIONS, AND BY MIDWESTERN STATES, SELECTED YEARS, 1929-1980

STATE AND REGION	Per Capita Personal Income 1980P	Per Capita Personal Income as a Percentage of U.S. Average					Percentage Point Change	
		1980	1974	1964	1944	1929	1929/80	1974/80
UNITED STATES	$ 9,458	100	100	100	100	100	--	--
GREAT LAKES	9,627	102	104	105	107	109	- 7	- 2
Illinois	10,658	113	117	117	117	136	-23	- 4
Indiana	8,978	95	97	99	100	87	+ 8	- 2
Michigan	9,847	104	109	109	116	113	- 9	- 5
Ohio	9,398	99	102	103	111	111	-12	- 3
Wisconsin	9,254	98	96	97	93	97	+ 1	+ 2
PLAINS	8,918	94	94	88	87	76	+19	--
Iowa	9,178	97	98	93	82	82	+15	- 1
Kansas	9,958	105	99	96	97	76	+29	+ 6
Minnesota	9,519	101	100	92	84	85	+16	+ 1
Missouri	8,846	94	93	96	90	89	+ 5	+ 1
Nebraska	8,914	94	90	90	90	84	+10	+ 4
North Dakota	8,556	90	102	78	84	53	+37	-12
South Dakota	7,452	79	78	71	80	59	+20	+ 1
NEW ENGLAND	9,207	98	97	99	101	112	-14	--
MIDEAST	10,432	110	116	117	122	141	-30	- 5
SOUTHEAST	7,882	83	83	74	67	53	+30	+ 1
SOUTHWEST	8,800	93	85	84	81	69	+24	+ 8
ROCKY MOUNTAIN	8,942	94	91	90	94	84	+10	+ 4
FAR WEST	10,269	109	106	111	126	117	- 9	+ 3

P -- Preliminary

Source: Advisory Commission on Intergovernmental Relations, M-132, December, 1981, Table 55, p. 77.

TABLE 6

RATES OF GROWTH OF TOTAL PERSONAL INCOME, BY REGIONS, AND BY MIDWESTERN STATES, SELECTED YEARS, 1960-1977

REGION OR STATE	Average Annual Growth Rate			Rate Relative to U.S. Average		
	1960/70	1970/75	1975/77	1960/70	1970/75	1975/77
UNITED STATES	7.30	10.19	9.89	100	100	100
GREAT LAKES	6.70	8.50	9.66	91	83	98
Illinois	6.51	8.57	7.44	88	84	75
Indiana	6.79	8.88	10.85	92	87	110
Michigan	7.24	8.75	10.93	98	86	110
Ohio	6.51	7.84	10.12	88	77	102
Wisconsin	6.89	9.11	10.79	93	89	109
PLAINS	6.80	9.40	9.30	92	92	94
Iowa	6.87	10.42	6.56	93	102	66
Kansas	6.27	9.52	10.24	85	93	104
Minnesota	7.55	9.14	11.50	102	90	116
Missouri	6.86	8.16	10.33	93	80	104
Nebraska	6.55	10.73	5.73	89	105	58
North Dakota	5.87	13.81	5.23	80	135	53
South Dakota	5.53	10.04	10.44	75	98	106
NEW ENGLAND	7.10	7.70	8.77	96	75	89
MIDEAST	6.70	7.60	7.70	91	75	78
SOUTHEAST	8.60	11.00	10.63	117	108	107
SOUTHWEST	7.90	11.20	12.42	107	110	126
ROCKY MOUNTAIN	7.00	11.80	11.12	95	116	112
FAR WEST	7.60	9.55	11.60	103	94	117

Source: Advisory Commission on Intergovernmental Relations, A-74, June, 1980, Table 10, p. 18-19.

the national growth rate, but during the early 1970s, this growth rate slowed even more to only 83 percent of the national growth. From 1975 to 1977, a time of relative economic recovery, the growth rate for the Great Lakes states responded dramatically, and was 98 percent of the nationwide growth rate for this period. These fluctuations in growth rates for total personal income present considerable uncertainty and difficulty in planning the public revenue and expenditure process in the Great Lakes states. In addition, the economic recession which began around 1980, the impact of which cannot yet be determined, is expected to dramatize the revenue problems in certain Great Lakes states even more in the early 1980s.

While the rates of growth of total personal income relative to the U.S. average have remained very stable in the Plains region as a whole (92, 92, and 94 percent for the three periods), the New England and Mideast Regions (96, 75, and 89 percent, and 91, 75, and 78 percent for the three periods, respectively) have been marked by fluctuations in growth rates compared to the U.S. average. At the same time, the more rapid growth regions of the country, e.g., Southeast and Southwest, have consistently maintained growth rates above the national growth rate over the last two decades. The older industrialized areas still have the overall advantage in terms of personal income and economic well-being, but these states have become much more conscious of the problems inherent in economic bleak times. Some policymakers in the Great Lakes area, for example, are very much concerned that continued and sustained slow national growth may well result in a loss of the region's wealth advantage in absolute rather than in relative terms.

The General Slowdown in Government Taxing and Spending in the Midwest

There has been a general slowdown in governmental taxing and spending at all levels across the country in recent years. State and local governmental spending expanded rapidly from the early 1940s to the mid 1970s, growing about three times as fast as the economy. Per capita expenditures in constant dollars at both state and local levels increased approximately three-fold from 1939 to 1976. At the same time, state and local expenditures as a percent of gross national product increased to 6.2 percent and to 5.2 percent, respectively, in 1975. Since the mid-1970s, however, the amount of state and local governmental spending has leveled off and declined (see Advisory Commission on Intergovernmental Relations, M-132, December, 1981, Table 1, p. 10). While governmental spending continues to increase in nominal terms, it has not kept pace with the growth of the economy or the rate of inflation. Most taxing authorities expect the slowdown trend in taxing and spending to continue, at least in the near future. The wide variety of fiscal restraints, namely the revenue and expenditure limitation provisions which were enacted and implemented in several states during the latter 1970s, are expected to reinforce this slowdown trend.

The popular press is quick to point to rapidly increasing taxes as the basic reason for growing taxpayer dissatisfaction, and hence the general spending slowdown, but several authorities on taxation have suggested that increased tax burdens have not been the primary reason for growing taxpayer resistance. Due (1982), for example, has speculated on the reasons for the general slowdown in taxing and spending, and has suggested a variety of factors which may be responsible for the general slowdown, including concern over

inflation, dissatisfaction with governmental inefficiency, dislike of irritating regulatory policies, and a backlash over minority rights.

While most people have been keeping pace with inflation through corresponding increases in incomes, they typically focus only on the sharp increases in prices and cost of living, and hence, strike out at governmental spending. At the same time, people question the efficiency and quality of governmental services, and believe that public employee unions have become much too strong, that students' test scores are failing, that criminals go unpunished, and that welfare recipients deserve less. Confronting other possible sources of taxpayer dissatisfaction, the Reagan administration in 1980 began a systematic program to reduce the number of governmental regulatory policies, and also to reassess the implications and costs of certain minority rights programs.

The data in Table 7 disclose that the slowdown in governmental taxing and spending has ocurred across the entire country, but that the magnitude of the recent decline does vary across regions and states. For the United States as a whole, state and local tax revenue as a percent of personal income increased from 10.4 percent in 1965 to 12.3 percent in 1975, but then declined to 11.6 percent in 1980. The change in revenue from 1965 to 1975 represented an annual average percent increase of 1.6 percent, whereas the change in revenue from 1975 to 1980 represented an annual average percent decrease of 1.2 percent. In terms of the variations across the regions, state and local revenue as a percent of personal income decreased from 13.9 to 13.7 percent from 1975 to 1980 (0.4 annual average percent decrease) for the high tax mideast region, but decreased from 10.7 to 10.3 percent (0.7 annual average percent decrease), and from 11.1 to 10.4 percent (1.3 annual average percent decrease), for the southeast and southwest regions, respectively. The far west region exhibited the greatest decrease in revenue from 14.1 to 11.9 percent (3.3 annual average percent decrease) from 1975 to 1980. Interestingly, the Rocky Mountain region was the only one demonstrating a modest increase in revenue from 11.8 to 11.9 percent (0.2 annual average percent increase) from 1975 to 1980.

The data in Table 7 also disclose considerable variation across the Great Lakes and Plains regions, as well as across the individual midwestern states. It should be noted first that neither the Great Lakes nor Plains regions are high tax areas. Both of these regions have been consistently below the national average in state and local tax revenue as a percent of personal income from 1965 to 1980 (except for the Plains region in 1965). For the two regions as a whole, the relative decline in revenue has been greater in the Plains region with a decrease from 11.7 to 10.8 percent (1.6 annual average percent decrease) for 1975 to 1980, than for the Great Lakes region with a decrease from 11.3 to 10.7 percent (1.2 annual average percent decrease) for the same time period.

Again for the two regions as a whole, using the percentage figures for 1980, certain states such as Minnesota (13.7 percent), Wisconsin (12.5 percent), and Michigan (11.5 percent), have consistently demonstrated high tax effort in terms of state and local revenue as a percent of personal income, whereas other states such as Ohio (9.35 percent) and Missouri (9.3 percent) have consistently demonstrated low tax effort. At the extreme ends of these variations in these regions, the data for the latter 1970s reveal a sharp drop

TABLE 7

STATE AND LOCAL TAX REVENUE AS A PERCENT OF PERSONAL INCOME, BY REGION, AND BY MIDWESTERN STATES, SELECTED YEARS, 1965-1980

STATE AND REGION	1980	1975	1965	Annual Average Percent Increase or Decrease 1975-80	1965-75
UNITED STATES	11.6	12.3	10.4	- 1.2	1.6
GREAT LAKES	10.7	11.3	9.7	- 1.2	1.6
Illinois	11.2	11.7	8.9	- 0.8	2.8
Indiana	8.8	11.1	10.2	- 4.6	0.9
Michigan	11.5	11.7	10.7	- 0.3	0.9
Ohio	9.4	9.7	8.6	- 0.7	2.0
Wisconsin	12.5	13.8	12.5	- 2.0	1.0
PLAINS	10.8	11.7	10.8	- 1.6	0.8
Iowa	11.0	12.4	11.6	- 1.8	0.4
Kansas	10.0	10.9	11.7	- 1.6	- 0.7
Minnesota	12.7	13.9	12.7	- 1.8	0.9
Missouri	9.3	10.3	8.7	- 2.1	1.7
Nebraska	11.0	10.7	9.3	0.9	1.6
North Dakota	10.2	10.9	11.8	- 1.4	- 0.7
South Dakota	10.6	11.6	12.6	- 1.8	- 0.8
NEW ENGLAND	12.3	12.8	10.0	- 0.7	2.5
MIDEAST	13.7	13.9	10.5	- 0.4	2.8
SOUTHEAST	10.3	10.7	10.0	- 0.7	0.6
SOUTHWEST	10.4	11.1	10.2	- 1.3	0.9
ROCKY MOUNTAIN	11.9	11.8	11.6	0.2	0.1
FAR WEST	11.9	14.1	11.8	- 3.3	1.8

Source: Advisory Commission on Intergovernmental Relations, M-132, December, 1981, Table 21, p. 32.

in revenues from 11.1 to 8.8 percent (4.6 annual average percent decrease) in Indiana, but a healthy increase in revenues from 10.7 to 11.0 percent (0.9 annual average percent increase) in Nebraska.

The data in Table 8 present another perspective of the taxing and spending slowdown in the public sector in terms of per capita state and local tax collections. For the United States, per capita state and local tax collections increased from $264 in 1965, to $664 in 1975, to $987 in 1980. These dollar increases represented a 9.7 annual average percent increase from 1965 to 1975, but a reduced 8.3 annual average percent increase from 1975 to 1980. The data in Table 8 basically reflect the data presented in the previous table, with the high tax mideast region in 1980 having the highest per capita tax collections ($1,208), and the low tax southeast ($735) and southwest ($880) having the lowest. Once again, while the far west region in 1980 had the second highest per capita tax collections ($1,028), it also had the slowest annual average percent increase (6.9 percent) from 1975 to 1980. On the other hand, the Rocky Mountain region with $997 per capita tax collections had the greatest annual average increase (10.9 percent) for the same period.

As expected based on the previous discussion, both the Great Lakes and Plains regions have been below the national average in per capita state and local tax collections from 1965 to 1980 (except the Great Lakes region in 1965). Considerable variation once again is apparent across the midwestern states with certain states in 1980 recording high per capita tax collections, e.g., Minnesota, $1,125; Illinois, $1,084; Michigan, $1,075; and Wisconsin, $1,061, and others recording low per capita tax collections, e.g., Indiana, $744; Missouri, $759; South Dakota, $789; and Ohio, $810. Again, the states of Indiana and Nebraska seemed to deviate somewhat from the general revenue pattern for the midwestern states for this fifteen-year period. In Indiana, the 8.5 percent annual average increase between 1965 and 1975, declined dramatically to a 5.5 percent annual average increase between 1975 and 1980. In Nebraksa, however, the 10.1 percent annual average increase between 1965 and 1975 actually increased to 10.8 percent annual average increase from 1975 to 1980. In addition, four states (Michigan, Iowa, Kansas, and Nebraska) of the twelve states improved the annual average percent increase in per capita tax revenues during the latter 1970s.

General Governmental Revenue Systems in the Midwest

Whereas the previous section considered the impact of certain demographic and economic trends over time on the well-being of the midwestern states, particularly on the well-being of these states during the last decade, this section on revenue systems attempts to assess the status and health of governmental taxing and spending in the midwestern states as they move into the 1980s. For the most part, the assumption is made in this study that future revenue prospects for the public schools basically depend on the future revenue prospects for state and local governments in general. In other words, tax revenue prospects for the public schools are very closely related to the overall revenue system for a given state, and also as pointed out in the previous section, to the overall economic climate in a given state. This section includes a discussion of tax ability and tax effort measures for the midwestern states, and a discription of their state and local governmental

TABLE 8

PER CAPITA STATE-LOCAL TAX COLLECTIONS--AMOUNT, AND AVERAGE RATE OF INCREASE, BY REGION, AND BY MIDWESTERN STATES SELECTED YEARS, 1965-1980

STATE AND REGION	1980	1975	1965	Annual Average Percent Increase 1975-80	Annual Average Percent Increase 1965-75
UNITED STATES	$ 987	$ 664	$ 264	8.3%	9.7%
GREAT LAKES	995	649	270	8.0	9.2
Illinois	1,084	730	266	8.2	10.6
Indiana	744	580	257	5.1	8.5
Michigan	1,075	682	290	9.5	8.9
Ohio	810	534	225	8.7	9.0
Wisconsin	1,061	719	310	8.1	8.8
PLAINS	911	606	254	8.5	9.1
Iowa	967	637	276	8.7	7.9
Kansas	926	598	273	9.1	8.2
Minnesota	1,125	754	299	8.3	9.7
Missouri	759	523	223	7.7	8.9
Nebraska	963	577	220	10.8	10.1
North Dakota	847	613	248	6.7	9.5
South Dakota	789	543	241	7.8	8.5
NEW ENGLAND	967	658	265	8.0	9.5
MIDEAST	1,208	767	290	9.5	10.2
SOUTHEAST	735	486	185	8.6	10.1
SOUTHWEST	880	551	233	9.8	9.0
ROCKY MOUNTAIN	997	595	267	10.9	8.3
FAR WEST	1,028	738	314	6.9	8.9

Source: Advisory Commission on Intergovernmental Relations, M-132, December, 1981, Table 22, p. 34.

revenue systems, including recently enacted tax revenue and expenditure limitation provisions, and recently enacted tax increases.

Tax Ability and Tax Effort Measures

Tax wealth or fiscal capacity is clearly a major determinant of tax revenues, yet there are a number of problems and issues associated with the measurement of the ability of state and local governments to raise tax revenues. These problems and issues have received considerable attention over the years, and different alternative approaches have been developed for estimating tax capacity or tax wealth. The various approaches, including the use of personal income or the representative tax system, all have certain inherent shortcomings. In the last few decades, however, the representative tax system (RTS) approach has been carefully developed and refined, and used with increasing frequency to examine tax wealth in the fifty states.

While several caveats are in order whenever the RTS approach is used, this approach does provide a heuristic framework for looking at all fifty states. This approach, through the development of common tax capacity and tax effort measures, permits meaningful comparisons of the ability of state and local governments to raise revenues to support public services. The first major variable, fiscal capacity, is expressed in dollars per capita, and indicates the relative ability to pay of state and local governments. The second variable, fiscal effort, is expressed as a percentage, and indicates the extent to which these governments actually use their ability to pay. It is important to emphasize that these two measures--fiscal capacity and effort--are presented on a relative basis, that is based on relative comparisons across states rather than on some absolute criterion.

In addition, the RTS approach provides a framework for addressing the potential revenue raising ability of taxing jurisdictions given their current tax structures. The methodological procedures of the RTS approach for estimating tax capacity and tax effort are relatively straightforward. The following four steps, for example, are used in determining tax capacity:

> (1) identifying for each of the various kinds of state and local taxes the tax base or "allocator" which represents the degree to which the taxable activity exists within the jurisdiction; (2) with these allocators and the amount of taxes actually collected, determining for each tax a national average rate, which, if applied throughout the nation would have procured the same total amount of revenues that state and local governments actually obtained; (3) estimating by State the potential yield of each type of tax by imposing the aforementioned uniform nationwide rates to the State allocator bases; and (4) aggregating the potential yield amounts for each tax to derive the total capacities of a given State (Halstead, 1978, p. 4).

Similarly, under the RTS approach, tax effort is:

> ...expressed as the percentage relation between actual amounts of tax revenues obtained by governments and their tax capacity. ...actual total tax revenues collected equal total tax capacity for

> the nation as a whole. Since the nationwide effort measure is 100 percent, the effort values for various States actually indicate how they compared in tax revenue performance with the national average. Thus effort is expressed as a relative measure in terms of the national average practice. For example, a State with an effort index of 125 collects 25 percent more tax revenues from the particular source involved relative to its capacity than do States on the average (Halstead, 1978, pp. 5-6).

The system, then, is representative "in the sense that potential revenues are determined by applying a uniform taxing system in a state which represents a cross section of state and local government tax practice currently affecting most citizens" (Halstead, 1978, p. 4). Summary data based on the Representative Tax System (RTS) approach for 1979 are presented for each of the twelve midwestern states in Table 9. The overall tax capacity and tax effort measures for all taxes, as well as the capacity and effort measures for each major source of revenue--the general sales tax, personal income tax, and property tax--are displayed. These tax capacity and effort measures for the various states represent indexes per capita as a percent of the national average. The capacity and effort measures for the first state of Illinois, for example, may be interpreted as follows: the overall capacity index of 112 indicates that, on a per capita basis, Illinois had 12 percent more capacity than the national average capacity in 1979. Similarly, the overall tax effort index of 99 indicates that Illinois collected 1 percent less tax revenues relative to its capacity than did states on the average in 1979.

Collectively, the twelve midwestern states have an impressive tax base--six states have above average capacity measures for all taxes, and five states have capacity measures for all taxes which fall within 5 percent of the average. In terms of tax effort for all taxes, however, three states demonstrate considerably above average tax effort, a few states about average effort, and a majority of the states below average tax effort. While there is considerable variation for both measures, the variation is more extensive for the effort index.

With regard to the range for tax capacity, the highest ranking state was Illinois (112) and the lowest was South Dakota (92), whereas for tax effort, the highest state was Wisconsin (119) and the lowest was North Dakota (77). Based on the RTS approach, three states, Michigan (capacity 102/effort 114), Minnesota (capacity 102/effort 117), and Wisconsin (capacity 96/effort 119) may be considered as high tax effort-high spending states. Other states such as Iowa (capacity 106/effort 93), Illinois (capacity 112/effort 99), and Nebraska (capacity 96/effort 98) may be considered as average tax effort states, but may range from average to above average spending because of above average tax capacity measures. At the other end of the continuum, four states, Ohio (capacity 99/effort 86), Missouri (capacity 95/effort 83), Indiana (capacity 97/effort 84), and South Dakota (capacity 92/effort 84) may be considered as low effort-low spending states. Kansas (capacity 107/effort 87) and North Dakota (capacity 106/effort 77) have above average tax capacity measures which would generate higher spending levels despite their low tax efforts.

TABLE 9

CAPACITY AND EFFORT MEASURES FOR ALL TAXES, AND BY TYPE OF TAX FOR THE MIDWESTERN STATES, BASED ON 1979 DATA

	All Taxes		General Sales Tax		Personal Income Tax		Property Tax	
STATE	Capacity	Effort	Capacity	Effort	Capacity	Effort	Capacity	Effort
Illinois	112	99	106	107	124	76	116	107
Indiana	97	84	97	119	101	72	98	84
Iowa	106	93	102	65	91	129	129	95
Kansas	107	87	102	83	95	80	106	106
Michigan	102	114	108	81	112	127	96	135
Minnesota	102	117	109	66	95	198	108	103
Missouri	95	83	103	93	96	82	93	73
Nebraska	96	98	99	87	88	92	101	124
North Dakota	106	77	112	70	76	60	111	82
Ohio	99	86	96	72	105	84	103	91
South Dakota	92	84	103	98	64	0	102	114
Wisconsin	96	119	97	85	90	197	106	117

Source: Advisory Commission on Intergovernmental Relations, M-134, March, 1982, pp. 106, 107, 122, and 125.

At the same time, there is considerable variation across states in the Midwest in terms of the relative reliance placed on different tax instruments to generate state-local revenues. In relation to the general sales tax, all twelve midwestern states have about or above average tax capacities, with a high in North Dakota (112) and a low in Ohio (96). With regard to the effort index for the general sales tax, some states demonstrate a very high effort, and some a very low effort, with the high in Indiana (119) and the low in Iowa (65). For the personal income tax, which involves the most variation, capacity measures range from a high in Illinois (124) to a low in South Dakota (64). The effort measures for the personal income tax range from a high in Minnesota (198) to a low in South Dakota (0) which does not have a state income tax. In terms of the property tax, the capacity index ranges from a high in Iowa (129) to a low in Missouri (93), whereas the effort index ranges from a high in Michigan (135) and a low in Missouri (73).

These data provide a useful basis for comparing and contrasting states in terms of the relative reliance placed on the different sources of revenues. In considering the specific tax structure within an individual state, then, based on the Representative Tax System, a high spending state such as Wisconsin was ranked somewhat below average on tax capacity (96) but quite high on tax effort (119) for all taxes. Wisconsin depends primarily on taxes on individual income, and clearly overutilizes this tax (capacity 90/effort 197). At the same time, Wisconsin underutilizes its general sales tax (capacity 97/effort 85), but overutilizes its property tax (capacity 106/effort 117). Minnesota, another high spending state, exhibits a very similar pattern. Minnesota ranks above average on tax capacity (102) and considerably above average on tax effort (117) for all taxes. Like Wisconsin, the State of Minnesota substantially overutilizes its taxes on individual income (capacity 95/effort 198), but substantially underutilizes its taxes on general sales (capacity 109/effort 66), and slightly overutilizes its taxes on property (capacity 108/effort 103).

On the other hand, South Dakota, for example, is a low tax state with a below average tax capacity of 92 and a substantially below average tax effort of 84 for all taxes. The State slightly underutilizes its taxes on general sales (capacity 103/effort 98), and somewhat overutilizes its taxes on property (capacity 102/effort 114). South Dakota is not a wealthy state as measured by personal income, and it is one of the few remaining states which does not have an individual income tax (capacity 64/effort 0). In a somewhat similar manner, Missouri, another low tax effort state, underutilizes all its major taxes with a somewhat below average tax capacity (95) and an extremely low tax effort (83) for all taxes. The State depends more heavily on general sales taxes (capacity 103/effort 93), than on individual income taxes (capacity 96/effort 82). In addition, Missouri has below average property wealth (capacity 93) with substantially below average property tax rates (effort 73).

State and Local Governmental Revenue Systems

The data in Table 10 provide an overview of the general revenue systems of state and local governments in the midwestern states. Once again marked by variation, these states differ considerably on the revenue side. Per capita general revenue of state and local governments, which includes federal aid, ranged in 1978-79 from a high in Minnesota ($1,805) to a low in

TABLE 10

GENERAL REVENUE OF STATE AND LOCAL GOVERNMENTS OF MIDWESTERN STATES, PER CAPITA AND PERCENTAGE DISTRIBUTION BY SOURCE, 1978-79

STATE	Per Capita	Federal Aid	Own Revenue Sources				
			Property	General Sales	Income	All Other	Charges & Misc.
U. S.	$1560	21.9	18.9	13.6	14.3	13.1	18.2
IL	1522	20.3	23.0	15.6	13.1	13.9	14.1
IN	1232	18.9	20.0	19.7	11.6	9.5	20.3
IA	1463	18.8	23.2	9.6	16.2	12.2	20.1
KS	1452	18.6	24.6	12.2	12.8	10.9	20.9
MI	1750	21.1	21.5	10.6	19.6	8.3	18.9
MN	1805	19.5	17.2	8.4	22.0	13.1	19.8
MO	1213	23.3	16.9	16.6	13.0	13.3	16.9
NE	1528	18.2	25.5	11.8	10.7	10.6	23.2
ND	1596	23.1	16.1	10.4	7.4	13.5	29.4
OH	1296	21.3	20.1	11.3	14.7	13.0	19.4
SD	1424	27.4	24.1	14.9	0.3	12.7	20.7
WI	1679	20.2	20.6	10.3	21.5	8.4	18.9

Source: Advisory Commission on Intergovernmental Relations, M-132, December, 1981, Section II, State Profiles, pp. 98-197.

Missouri ($1,213). In addition to Minnesota, other midwestern states above the national average for per capita general revenue ($1,560) included Michigan ($1,750), North Dakota ($1,596), and Wisconsin ($1,679). Most midwestern states, however, were below the national average, with Indiana ($1,232) and Ohio ($1,296) joining Missouri in recording significantly below average per capita general revenue.

In terms of federal aid as a percentage of per capita general revenue, South Dakota recorded the highest proportion (21.4 percent), whereas Nebraska had the lowest proportion (18.2 percent) of the midwestern states. As might be expected given the previous discussion regarding the ratios of federal funds distributed for federal taxes paid across the country, all five Great Lakes states were below the national average in terms of federal aid. Among the Plains states, Missouri (23.3 percent) and North Dakota (23.1 percent), like South Dakota, were above the average percentage, whereas Iowa (18.3 percent) and Kansas (18.6), like Nebraska, were below the national average of federal aid as a percentage of per capita general revenue.

These midwestern states also vary considerably with regard to the relative reliance placed on their own three major sources of state-local revenues--property, general sales, and income. As the data in Table 10 disclose, the property tax is still the major source of state and local revenues. In 1978-79, for the states as a whole, property taxes on a percentage basis accounted for 18.9 percent of general revenue of state and local government. The states in the Midwest rely proportionately more on the property tax to generate revenues than do states, on the average, across the country. All states in the Midwest, except three (Minnesota, Missouri, and North Dakota), were considerably above the national average for the proportion of state and local general revenue for which property taxes account.

While the states in the Midwest still depend heavily on the property tax, these states, along with the other states of the country, have placed less relative reliance on this tax for revenue over the past two decades. Property taxes, for example, provided 45 percent of total state-local tax collections in 1964, whereas this amount had been reduced to 30 percent in 1980 (Advisory Commission on Intergovernmental Relations, M-123, October, 1980, Table 47, p. 64). There was a pronounced effort across most of the midwestern states during the 1970s to shift some of the costs of providing particular public services such as schooling from the local property tax to other state sources of revenue. As the states assumed greater responsibility for the financing of these services, they also implemented a number of property tax relief measures such as circuit breaker programs and homestead exemption programs. These programs target property tax relief, in particular, to low income and needy individuals.

Ten of the twelve midwestern states have both homestead exemption and circuit breaker programs; Michigan and Missouri have circuit breaker programs but no homestead exemption program. For the most part, these property tax relief programs were expanded and increased in all midwestern states during the 1970s. Some idea of the nature and magnitude of these property tax relief programs can be provided by a sampling from the different states. In Wisconsin, for example, which pioneered the circuit breaker program in 1964, all homeowners and renters in 1980 with household incomes below $14,000 were

eligible for a property tax credit based on up to $1,000 of property taxes. The homestead exemption program provided state financed property tax relief to all property owners, including homeowners. Illinois' circuit breaker program provided homeowners and renters, aged 60 years or older or permanently disabled, with property tax relief ranging from $100 to $400, depending on household income. In both Indiana and Minnesota, as part of their homestead exemption programs, the state paid 8 percent of the homeowner's property taxes in 1981, and was scheduled to pay 6 percent in 1982.

During the 1970s, then, greater relative reliance has been placed on both the general sales tax and on the individual income tax across the country to generate more state and local tax dollars. The general sales tax, for example, which accounted for 15.2 percent of total state and local tax collections in 1964, increased to 23.5 percent in 1980. In a more dramatic change, the individual income tax which provided 7.9 percent of total state and local tax revenues in 1964 more than doubled to 18.5 percent in 1980 (Advisory Commission on Intergovernmental Relations, M-123, October, 1980, Table 47, p. 64). While this overall shift to state sources of revenue, that is to general sales and individual income taxes, has been significant, there is considerable variation across the states. Most states, of course, depend upon some combination of these two tax instruments for state revenues, although there are a few states, e.g., South Dakota in the Midwest, that rely very heavily upon general sales tax revenue, but have no individual income tax, and a few states that rely very heavily on individual income tax revenue, but have no general sales tax.

In the Midwest, along with South Dakota, both Indiana and Missouri also depend very heavily on the general sales tax for state level revenue. In 1981, in South Dakota, general sales (53 percent) and gross receipts (32 percent) accounted for 85 percent of total state tax revenue, the highest percentage on these measures of any state in the country. For the states of Indiana and Missouri, general sales (49 and 37 percent) and gross receipts (16 and 16 percent) accounted for 65 and 53 percent, respectively, of total state tax revenue. The states of Michigan, and particularly, Minnesota and Wisconsin, however, depend very heavily on taxes on income for state level revenue. In 1981, taxes on individual income in Wisconsin, Minnesota, and Michigan accounted for 46, 41, and 33 percent, respectively, of total state tax revenue (U. S. Bureau of the Census, GF 81, No. 1, 1982, Table 6, p. 10).

All states in the Midwest shared in this national trend of increased reliance on individual income taxes, particularly during the 1970s, except for South Dakota which does not have an individual income tax. Several midwestern states did not enact individual income taxes until the late 1960s and early 1970s, including Illinois (1969), Indiana (1963), Michigan (1967), Nebraska (1967), and Ohio (1971). The midwestern states demonstrating the most rapid reliance on individual income taxes during the 1970s included Illinois and Ohio which moved from no reliance on the tax in 1969 and 1971 to 28 and 22 percent, respectively, of total state tax revenue in 1981; and also states like Iowa and Nebraska which increased their reliance on this tax from 18.0 and 18.3 percent in 1971 to 37.0 and 25.0 percent in 1981, respectively (U.S. Bureau of the Census, GF 81, No. 1, January, 1982, Table 6, p. 10).

Tax Revenue and Expenditure Limitation Provisions

While taxing and spending limits have been imposed traditionally on local governmental units, particularly on their ability to raise property tax revenues, the adoption of revenue and expenditure constraints at the state level is a recent phenomenon. Four of the twelve midwestern states--Minnesota, Missouri, Michigan, and Wisconsin--have recently enacted state level limitations. The states of Michigan and Missouri both enacted constitutional revenue limitations in 1978 and 1980, respectively. In both states, state revenues, excluding debt service and federal aid, are limited to the prior year ratio of revenues to personal income. The governor in each state, along with a two-thirds vote of the legislature, may declare an emergency to exceed the limit. In Missouri, revenues exceeding the limit by 1 percent or more must be used to provide tax relief. In 1979, the states of Minnesota and Wisconsin both indexed their individual income tax programs. In Minnesota, the income tax brackets, personal exemptions, and standard deductions are indexed to the Minneapolis-St. Paul Consumer Price Index. In 1979, income tax brackets were indexed to 85 percent of the CPI for the Minneapolis-St. Paul metropolitan area, but recent state revenue shortfalls have resulted in subsequent modifications to this indexation scheme. In Wisconsin, beginning with the 1980 tax year, the different income brackets are adjusted to reflect the percentage change from year to year in the United States CPI, but not to exceed 10 percent.

States characteristically have imposed some type of limits on local governmental taxing and spending powers, and similarly all midwestern states have historically placed some constraints on local revenues and expenditures. Most states across the country had statutory provisions imposing specific property tax rate limits prior to 1970, but with rapidly rising property values in the last decade, these tax rate limitations have lost much of their effectiveness in controlling spending. As a result, states are now adopting other forms of revenue and expenditure controls such as property tax levy limits, overall property tax rate limits, expenditure caps, assessment constraints, and full disclose laws. During the 1970s, for example, six midwestern states--Indiana, Iowa, Kansas, Minnesota, Ohio, and Wisconsin--adopted property tax levy limits, and three states, Iowa and Kansas again, along with Nebraska, adopted expenditure caps. During this same time period, one state, Minnesota, enacted a limitation provision on annual assessment increases (Advisory Commission on Intergovernmental Relations, M-123, 1980, Table 127, p. 185).

Perhaps Nebraska adopted the most restrictive state limitation on local revenue. In 1979, Nebraska enacted a statutory provision which specifies that no local government can adopt a budget based on anticipated revenues which exceed the current year's revenues by more than 7 percent. Certain provisions, however, are included for population growth which exceeds 5 percent. In addition, the limitation may be exceeded in the event of an emergency or by referendum. In addition to the already mentioned constitutional limitation on state revenues in Michigan and Missouri, both of these states also adopted constitutional provisions in 1978 which limit local property tax revenues as well. In Michigan, local property tax mill rates must be rolled back when the growth in assessed value exceeds the rise in the CPI. Similarly, in Missouri, local property tax levies are limited to the rise in the general price level.

In both states, voter approval is necessary to exceed the limit. In Indiana, local property levies have been limited by statute to the average growth in assessed values over the previous three years, and in North Dakota, in fiscal years 1981 and 1982, a levy limit of 7 percent was imposed by statute on property tax increases.

Recent Tax Increases

Because of the economic recession, and also because of cutbacks in federal revenues, many states across the country, as well as in the Midwest, had difficult times putting together their budgets without some type of tax increase as they moved into the 1980s. Despite budget cuts, when state legislatures were forced to increase taxes, which they were reluctant to do, they typically depended upon increased excise taxes for additional state revenues. In 1981, state lawmakers adopted a number of revenue measures increasing tax rates on such items as motor fuel, tobacco, and alcoholic beverages. A number of states in the Midwest, Iowa, Indiana, Minnesota, Nebraska, Ohio, South Dakota, and Wisconsin, all increased their motor fuel tax. In addition, the midwestern states of Nebraska, South Dakota, and Wisconsin all increased both their cigarette and tobacco taxes, and their alcoholic beverage tax. Indiana increased just its tax on alcoholic beverages and Iowa increased just its tax on cigarettes.

A few states in the Midwest, confronted with severe revenue shortfalls and large budget deficits, were forced to adopt more drastic tax increases. The State of Minnesota, for example, increased its general sales tax rate from 4 to 5 percent for the period of July 1, 1982, to June 30, 1983. Similarly, Ohio increased its general sales tax from 4 to 5 percent for the period of January 1, 1981, to July 1, 1981, at which time it reverted back to 4 percent. In the same manner, South Dakota increased its general sales tax from 4 to 5 percent for the period of April 1, 1980, to July 1, 1981, at which time it reverted back to 4 percent (see U. S. Bureau of the Census, Report GF 81 No. 1, Table 8, p. 12).

Although some states in the Midwest have not found it necessary to enact tax increases, they have been forced to adopt various measures and tactics which have temporarily avoided or simply delayed inevitable tax increases. These states have adopted different revenue measures under the assumption that the sluggish economic conditions will soon change, thus presenting a more favorable climate for obtaining tax revenues. In addition to cutting services and reducing the number of state employees, some of these tactics have included the delaying of state aid payments to local units of governments, transferring state revenues from one fund to another fund, increasing user fees such as university tuition, and imposing temporary surcharges on state income tax payments. Some states in the Midwest, even under more favorable economic circumstances, will still find it necessary to enact tax increases in the coming years. If the 1980 recession lasts longer than expected, or if economic recovery is slower than anticipated, then tax avoidance or tax delaying tactics will further complicate the difficult taxing and spending decisions which will have to be made in certain states.

State Education Systems in the Midwest

At the same time that there is considerable variation in the revenue systems of state and local governments in the Midwest, there is also considerable variation in state education systems in these states. To highlight some of these differences, this section begins with a brief consideration of some selected characteristics of these state education systems. Then, the two major national trends in education which are having a dramatic impact in the Midwest, declining enrollments and shifting sources of revenues for the schools, are considered in detail. Trends in revenues and expenditures for the midwestern schools are examined, and the various school finance reforms which occurred during the 1970s in the midwestern states are discussed. This section concludes with a description of the school finance system used in each of the twelve midwestern states.

The data in Table 11 graphically illustrate the tremendous differences which exist across major characteristics of state education systems in the Midwest. To begin with, the public school systems in some states are more than five and six times larger than those in other states. Three of the states in the Great Lakes area (Illinois, Michigan, and Ohio) have public school enrollments which approach nearly 2.0 million students in size. On the other hand, four states in the Plains area (Kansas, Nebraska, North Dakota, and South Dakota) have enrollments of substantially less than 500,000 students in size. Despite these differences in size, however, all midwestern states have a significantly declining public school enrollment problem which will be discussed shortly.

As might be expected given these enrollment figures, another prominent feature of state education systems in the Midwest is the large number of school districts. There are approximately 16,000 local school districts across the country, and the midwestern states account for about 40 percent of them. Only four states (California, Illinois, Nebraska, and Texas) have over 1,000 school districts, and two of them are located in the Midwest. These large numbers of school districts significantly complicate the school finance picture in the midwestern states.

All states in the Midwest "reformed" or substantially modified their school finance systems during the 1970s. In several states, the adoption of these reforms was basically accomplished by significantly increasing state support levels to the public schools. For the 1980-81 school year, state support levels varied considerably across the states in the Midwest. Compared with a national average of 49.7 percent of state revenues for the schools, a couple of states in the Midwest, i.e., Indiana (59.7 percent) and Minnesota (54.7 percent) exhibited rather high state support levels, whereas a couple of states, i.e., Nebraska (24.4 percent) and South Dakota (27.0 percent) exhibited significantly low state support levels.

In terms of taxing and spending for the public schools, the average revenue per pupil across the country for the 1978-79 school year was $2,252, and in the Midwest, this measure ranged from $2,544 in Minnesota to $1,937 in South Dakota. The average expenditure per pupil across the country for the same school year was $2,210, and in the Midwest, this measure ranged from $2,682 in Michigan to $1,699 in South Dakota.

TABLE 11

SELECTED CHARACTERISTICS OF STATE EDUCATION SYSTEMS OF MIDWESTERN STATES

STATE	Public School Enrollments 1980/81 ('000)	Number of School Districts 1980/81	State Support Level 1980/81 (Percentage)	Revenue Per Pupil 1978/79 (Dollars)	Expenditure Per Pupil 1978/79 (Dollars)
United States	40,986	15,981	49.7	$2,252	$2,210
Illinois	1,980	1,013	40.8	2,473	2,399
Indiana	1,055	306	59.7	1,959	1,859
Iowa	516	443	43.1	2,281	2,264
Kansas	415	307	45.6	2,373	2,137
Michigan	1,871	575	35.8	2,517	2,682
Minnesota	755	436	54.7	2,544	2,368
Missouri	845	549	36.9	2,020	1,856
Nebraska	280	1,064	24.4	2,179	2,198
North Dakota	116	327	45.4	2,048	1,977
Ohio	1,975	615	40.6	1,967	1,917
South Dakota	128	196	27.0	1,937	1,699
Wisconsin	830	433	36.8	2,450	2,400

Source: Columns 1 and 2 from National Education Association, Estimates of School Statistics, 1981-82 Edition, Table 2, p. 29, and Table 1, p. 28, respectively; column 3 from Advisory Commission on Intergovernmental Relations, M-132, December 1981, Table 17, p. 27; column 4 from National Center for Education Statistics, Revenue and Expenditures for Public Elementary and Secondary Education, 1978-79, Table 3, p. 18; column 5 from National Center for Education Statistics, Digest of Educational Statistics, 1981 Edition, Table 70, p. 81.

Major Trends in Education

Before school revenues and expenditures are examined in detail, the major trends in education involving declining public school enrollments and shifting sources of school revenues are considered. Both of these trends in education are directly related, of course, to the overall trends discussed previously involving the shifting population across the country and the shifting of the responsibility for a greater portion of the costs for certain state and local programs to the state level of government. Both of the major trends in education have significant implications for school finance.

Declining Public School Enrollments

Certainly a prominent characteristic of the public elementary and secondary school system throughout the 1970s, which has significant implications for funding, has been rapidly declining student enrollment. Total public school enrollment declined by approximately 4.9 million students or nearly 11 percent from 1970 to 1980. This reduction in total public student enrollment for the United States as a whole accelerated considerably during the latter 1970s, with the drop in enrollment increasing from 2.3 percent for the first half to 8.6 percent for the latter half of the decade (Table 12). Furthermore, public school enrollment is expected to decline by another three million students until 1984, representing an overall decline for the country of approximately 15 percent from the peak year of 1970 to about 1985. Elementary school enrollments are expected to decline through 1984, whereas secondary school enrollments are expected to bottom out around 1990. The subsequent anticipated growth in school enrollment is expected to be gradual, and also to remain below previous peak enrollment figures (Projection of Educational Statistics to 1988-89, 1980).

For the most part, the pattern of enrollment declines across the country basically reflects the general trends in population shifts to the west and south. The greatest declines in public school enrollments for the 1970s have occurred in the Plains (21 percent), Midatlantic (20.3 percent), Great Lakes (16.6 percent), and New England (13.5 percent). All these subregions experienced out-migration during the 1970s, although certain Plains states, namely Kansas, Minnesota, and Nebraska, had net in-migration during the latter 1970s. Two areas recorded the smallest reductions in public school enrollments for the decade--the southeast (3.8 percent) and far west (11.1 percent), and two areas actually experienced increased enrollments--the southwest (+4.7 percent) and Rocky Mountain (+3.8 percent). All regions experiencing a smaller reduction in enrollment than the national rate of decline or an actual increase in enrollment had substantial in-migration. There was considerable variation across regions in enrollment changes, and even greater variation across individual states.

The populous Midwest, with about 25 percent of the nation's students, recorded significant enrollment declines for the 1970s, experiencing enrollment losses at approximately twice the national rate of decline for this period. All states in these two subregions, the Great Lakes and Plains, experienced sharply declining enrollments for the decade--there were no exceptions. In addition, the rate of decline for all midwestern states (except Kansas) accelerated considerably during the latter 1970s. These reductions in

TABLE 12

PUBLIC ELEMENTARY AND SECONDARY SCHOOL ENROLLMENTS, AND PERCENTAGE CHANGE IN ENROLLMENTS FROM 1970 TO 1980 BY REGIONS, AND BY MIDWESTERN STATES

STATE AND REGION	(in thousands) 1980	1975	1970	Percent Change 1975-80	1970-75
UNITED STATES	40,986	44,847	45,894	- 8.6	- 2.3
GREAT LAKES	7,711	8,823	9,185	-12.6	- 4.0
Illinois	1,980	2,270	2,357	-12.8	- 3.7
Indiana	1,055	1,174	1,231	-10.1	- 4.6
Michigan	1,871	2,128	2,179	-12.1	- 2.3
Ohio	1,975	2,287	2,424	-13.6	- 5.7
Wisconsin	830	964	994	-13.9	- 3.0
PLAINS	3,056	3,497	3,816	-12.6	- 8.4
Iowa	516	612	660	-15.7	- 7.3
Kansas	415	442	512	- 6.1	-13.7
Minnesota	775	880	921	-14.2	- 4.5
Missouri	845	965	1,078	-12.4	-10.5
Nebraska	280	316	332	-11.4	- 4.8
North Dakota	116	131	147	-11.5	-10.9
South Dakota	128	151	166	-15.2	- 9.0
NEW ENGLAND	2,200	2,543	2,535	-13.5	--
MIDEAST	6,966	8,374	8,674	-16.8	- 3.5
SOUTHEAST	9,746	10,128	10,087	- 3.8	--
SOUTHWEST	4,262	4,189	4,059	+ 1.7	+ 3.0
ROCKY MOUNTAIN	1,346	1,335	1,298	+ 1.0	+ 2.8
FAR WEST	5,700	6,088	6,387	- 6.4	- 4.7

Source: Author calculations based on data from National Education Association, Estimates of School Statistics, 1971-72, 1976-77, and 1981-82 Editions, Table 2, Column 5.

enrollments have been somewhat greater in the Plains states than in the Great Lakes states. Early on, from 1970 to 1975, the considerably less populous Plains area recorded an enrollment loss (8.4 percent) at about twice the rate for the Great Lakes area (4.0 percent) and at almost four times the rate for the country as a whole (2.3 percent). From 1975 to 1980, the rate of decline for the Plains area was the same as for the Great Lakes area (12.6 percent), about one-third higher than the national rate of decline for the period (8.6 percent). For the decade, four states, i.e., Iowa, Missouri, North Dakota, and South Dakota, all in the Plains area, experienced more than 20 percent losses in student enrollment.

Shifting Sources of School Revenues

As mentioned earlier, there has been a gradual shift over time in the relative reliance placed on the different major sources of state and local revenues. This shift from the local property tax to state sources of revenues, such as the general sales tax or income tax, appears to have accelerated during the 1970s, and has been most pronounced in the area of public school finance. As states reformed their school finance structures during the early 1970s, they basically increased their average support levels to the public elementary and secondary schools in an effort to hold down property taxes. During the 1978-79 school year, for the first time, the average state share for the states as a whole (approximately 47 percent) exceeded the average local share (approximately 43 percent) of revenues for the public schools. The data in Table 13 (excluding Federal aid which remained at approximately 8 to 10 percent during this period) indicate that the state share of revenue for the public schools increased steadily throughout the decade from 42.0 percent in 1971-72 to 53.1 percent in 1979-80.

Interestingly, the pattern of increased state support varied widely across the midwestern states during the 1970s. In some states, e.g., Illinois, Michigan, and North Dakiota, the states' share of costs for the schools increased significantly during the early 1970s, only to decline during the latter 1970s. In others, e.g., Indiana and Ohio, the increase was dramatic throughout the decade, and in others, Kansas and Minnesota, the increase leveled off during the latter 1970s. Overall, this shifting of education costs from local to state tax sources, particularly income tax revenue, has resulted in a somewhat less regressive pattern of state-local tax burdens. At the same time, this shifting of the responsibilities for the financing of the public schools from the local level to the state governmental level has resulted in a greater centralization of education.

This trend toward greater centralization in the financing of education has received considerable attention recently. Several authorities have suggested that this continual and persistent growth in state support levels is having a detrimental impact on local control, and hence on the schooling process in this country. Some critics, for example, have argued for greater parental involvement in the schooling process in order to encourage greater efficiency. They contend that current organizational and financial arrangements in public education promote substantial inefficiencies because the role of parents in determining the quality of education that their children receive has been sharply reduced over the years. One approach to improve efficiency in education is simply to make some provisions for greater decentralization

TABLE 13

STATE SHARE OF STATE-LOCAL-OTHER-REVENUES FOR PUBLIC ELEMENTARY AND SECONDARY SCHOOLS, BY MIDWESTERN STATES, SELECTED YEARS, 1971-1980

STATE	1979-80	1975-76	1971-72	Percentage Point Increase or Decrease 1975 to 1980
UNITED STATES	53.1	47.5	42.0	+ 5.6
GREAT LAKES STATES				
Illinois	45.5	49.2	35.2	- 3.7
Indiana	59.2	43.1	33.9	+16.1
Michigan	41.8	53.8	46.8	-12.0
Ohio	47.0	38.9	19.5	+ 8.1
Wisconsin	39.3	34.7	32.2	+ 4.6
PLAINS STATES				
Iowa	43.0	39.8	30.3	+ 3.2
Kansas	49.5	49.6	31.3	- 0.1
Minnesota	58.1	57.9	51.1	+ 0.2
Missouri	41.1	38.1	36.9	+ 3.0
Nebraska	17.6	19.0	19.8	- 1.4
North Dakota	50.4	52.6	33.4	- 2.2
South Dakota	23.2	16.6	16.6	+ 6.6

Note: Table excludes federal aid.

Source: Advisory Commission on Intergovernmental Relations, M-123, October, 1980, Table 26, p. 36.

and a degree of competition. This element of competition would encourage efficiency by enabling parents to monitor more effectively the system as well as to provide a wider range of choice in the schooling process.

School Revenues and Expenditures

The general slowdown in state and local governmental spending discussed earlier has impacted significantly on the public schools which usually comprise the largest component of the public budget at these governmental levels. The data in Table 14 disclose a fairly consistent pattern of declining support for the schools in terms of state and local revenues as a percent of total personal income in the midwestern states during the 1970s. In 1971-72, for the United States as a whole, state and local revenues for schools as a percent of total personal income was 5.2 percent which declined to 5.0 percent in 1975-76 and to 4.6 percent in 1979-80. For the most part, this pattern of decline can be seen across the midwestern states as well. There were some exceptions to the general pattern, however, with both Indiana and Ohio decreasing at a more rapid rate than the other states. Indiana dropped from 5.5 percent in 1971-72 to 4.2 percent in 1979-80 (moving in state ranking from 16th to 40th), whereas Ohio dropped from 4.6 percent in 1971-72 to 3.9 percent in 1979-80 (moving in state ranking from 39th to 46th). The high spending states, e.g., Michigan, Minnesota, and Wisconsin, continued as high spending states relative to the other states, but revenues for schools declined in the high spending states as well, but in a more gradual manner. Nebraska was the only state to exhibit a trend of increased revenues for the schools during the period, recording 3.8, 4.1, and 4.8 percent, for 1971-72, 1975-76, and 1979-80, respectively.

Another perspective of school revenues is provided by considering the relative increases in revenues per pupil which have occurred across the states over the last decade. Total revenues for the elementary and secondary schools for the country as a whole increased 165 percent from 1970/71 to 1980/81 (see Table 15). Compared with the national average percentage increase for total revenues, the increase for state and local revenues was 161 percent, whereas the increase for federal revenues was 213 percent. The data in Table 15 display the national average percentage increases in revenues for the schools during the 1970s, and indicate the relative increases in each midwestern state as an index of the national average percentage increase.

For the decade, for total revenues, three states in the Great Lakes area, i.e., Illinois (86 percent), Indiana (72 percent), and Michigan (97 percent) had percentage increases in school revenues below average, and two states, i.e., Ohio (106 percent) and Wisconsin (109 percent), had percentage increases in school revenues above the national average of 165 percent. For the most part, the states in the Plains area fared better than those in the Great Lakes area. Nebraska (150 percent), Missouri (124 percent), Minnesota (120 percent), and Kansas (118 percent), for example, all had percentage increases in revenues considerably above the national average increase, and only one Plains state, i.e., Iowa (98 percent), was below the national average increase. As would be expected, the relative percentage increases for the decade in state and local revenues, which comprise the bulk of the revenues for the schools, closely paralleled the relative percentage increases in total revenues.

TABLE 14

STATE AND LOCAL REVENUES FOR SCHOOLS AS A PERCENT OF TOTAL PERSONAL INCOME, SELECTED YEARS, 1971-72 TO 1979-80

STATE	1979-80 Est. Percent	Rank	1975-76 Percent	Rank	1971-72 Percent	Rank
UNITED STATES	4.6		5.0		5.2	
GREAT LAKES STATES						
Illinois	4.5	33	5.1	20	4.8	32
Indiana	4.2	40	4.9	26	5.5	16
Michigan	5.1	11	5.0	23	5.8	10
Ohio	3.9	46	4.5	35	4.6	39
Wisconsin	5.1	11	5.7	8	5.9	7
PLAINS STATES						
Iowa	5.0	16	5.7	8	5.9	7
Kansas	4.3	39	4.3	41	4.8	32
Minnesota	5.7	5	5.9	6	7.0	3
Missouri	4.1	41	4.4	38	4.8	32
Nebraska	4.8	25	4.1	47	3.8	49
North Dakota	4.6	31	4.6	32	5.2	27
South Dakota	5.1	11	4.7	31	5.4	22

Source: Advisory Commission on Intergovernmental Relations, M-123, October, 1980, Table 27, p. 37.

TABLE 15

CHANGES IN REVENUES PER PUPIL FOR THE ELEMENTARY AND SECONDARY SCHOOLS IN THE MIDWESTERN STATES AS A PERCENTAGE OF THE U.S. AVERAGE INCREASE, 1970-1980

	Percent Increase	Index of Average United States Increase												
	U.S.	U.S.	IL	IN	IA	KS	MI	MN	MO	NE	ND	OH	SD	WI
1970/71 - 1980/81														
- Total Revenues	165	100	86	72	98	118	97	120	124	150	102	106	102	109
- State and Local Revenues	161	100	81	73	96	121	92	123	124	150	108	106	100	106
- Federal Revenues	213	100	170	66	178	81	205	138	121	159	54	110	109	192
1970/71 - 1975/76														
- Total Revenues	63	100	84	62	109	94	67	87	114	143	119	79	95	100
- State and Local Revenues	60	100	85	63	113	95	60	92	120	142	127	118	92	103
- Federal Revenues	94	100	108	73	116	98	194	102	84	185	67	67	110	116
1975/75 - 1980/81														
- Total Revenues	63	100	92	92	86	133	130	146	122	132	84	111	108	113
- State and Local Revenues	63	100	84	94	81	140	130	149	119	135	89	92	108	108
- Federal Revenues	61	100	211	69	208	69	147	166	162	98	51	172	107	236

Source: National Education Association, Estimates of School Statistics, 1971-72, 1976-77, and 1981-82 Editions.

The relative percentage increases in federal revenues for the schools varied considerably across the states in the Midwest. For the most part, the Great Lakes states, i.e., Illinois (170 percent), Michigan (205 percent), and Wisconsin (192 percent) far surpassed the national average percentage increase of 213 percent. Ohio exceeded the national average percent increase by 10 percent, but Indiana was about 35 percent below the national average percentage increase. For the Plains states, Iowa (178 percent), Nebraska (159 percent), and Minnesota (138 percent) were considerably above the national average percentage increase, whereas only two states, North Dakota (54 percent) and Kansas (81 percent), were below the average percentage increase.

The national average percentage increases in school revenues, both for total revenues, and for state and local revenues, were comparable, on the average, across both the first and second halves of the decade. The national average percentage increase in federal revenues for the latter 1970s (61 percent), however, was about 20 percent lower than the national average percentage increase for the early 1970s (94 percent). Some states were fairly consistent with steady revenue increases over both halves of the decade, e.g., Illinois, Missouri, Nebraska, but other states had sizable increases in one half but not the other half of the decade, e.g., Indiana, Michigan, Minnesota.

The data in Tables 16, 17, and 18 provide some insight into school expenditures in the midwestern states, both about levels of expenditures over time, and about functions and characteristics of expenditures for a recent school year. The data in Table 16 depict expenditures per pupil, and expenditures per pupil as a percentage of the national average, across the midwestern states for the last decade. The average expenditure per pupil for the states as a whole for the 1978-79 school year was $2,210, and this measure ranged in the Midwest from $2,682 in Michigan (121 percent of the national average) to $1,699 in South Dakota (77 percent of the national average). Five of the midwestern states had expenditures per pupil above the national average, but seven states had expenditures per pupil below the national average, and in some cases, considerably below the national average, e.g., South Dakota (77 percent), Indiana (84 percent), Missouri (84 percent), and Ohio (87 percent). Over the decade, expenditures per pupil, as a percentage of the national average, remained fairly stable in some states, e.g., Illinois, Iowa, Ohio, and North Dakota, increased in other states, e.g., Michigan and Nebraska, and declined in some, e.g., Indiana and South Dakota.

In Table 17, the average total expenditure for 1978-79 for elementary and secondary schools across the country is partitioned into the basic budget components, including expenditures for current operation, as well as expenditures for capital and interest expenses. Current expenditures are then broken down by various functions including administration, instruction, and the like. As a percentage of total expenditures, current expenditures represented 91.0 percent or $2,010 per pupil, whereas expenditures for capital and interest represented 6.3 and 2.3 percent, or $139 and $50 per pupil, respectively. As a percentage of total current expenditures, for example, the largest component for instructional expenditures represented 55.8 percent or $1,232 per pupil.

For the most part, current expenditure across the midwestern states in 1978-79 as a percentage of the national average were basically a reflection of

TABLE 16

EXPENDITURE PER PUPIL FOR PUBLIC ELEMENTARY AND SECONDARY SCHOOLS, AND AS A PERCENTAGE OF U.S. AVERAGE, FOR THE MIDWESTERN STATES, 1968-79

	1978-79		1973-74		1968-69	
STATE	Per Pupil	Percentage	Per Pupil	Percentage	Per Pupil	Percentage
UNITED STATES	$2,210	100	$1,281	100	$ 834	100
Illinois	2,399	109	1,425	111	903	108
Indiana	1,859	84	1,152	90	841	101
Iowa	2,264	102	1,273	99	850	102
Kansas	2,137	97	1,114	87	795	95
Michigan	2,682	121	1,459	114	821	98
Minnesota	2,368	107	1,450	113	939	113
Missouri	1,856	84	1,082	84	776	93
Nebraska	2,198	99	1,188	93	625	75
North Dakota	1,977	89	1,101	86	719	86
Ohio	1,917	87	1,120	87	747	90
South Dakota	1,699	77	1,011	79	710	85
Wisconsin	2,400	109	1,335	104	943	113

Source: National Center for Education Statistics, Digest of Educational Statistics, 1969 (Table 74, p. 56), 1974 (Table 77, p. 66), and 1981 (Table 70, p. 81) Editions.

TABLE 17

ELEMENTARY AND SECONDARY SCHOOL EXPENDITURE BY PURPOSE
1978-79

	United States		Average Index of United States											
	Percent	Per Pupil	IL	IN	IA	KS	MI	MN	MO	NE	ND	OH	SD	WI
Total Expenditures	100.0	$2,210	109	84	102	97	121	107	84	99	89	87	77	109
Current	91.0	2,010	110	84	105	98	122	107	86	98	90	89	83	111
Capital	6.3	139	100	88	88	89	116	116	69	127	108	66	(1)	95
Interest	2.3	50	114	94	68	72	150	122	70	112	44	72	40	90
Current Expenditures	100.0	$2,010	110	84	105	98	122	107	86	98	90	89	83	111
Administration	4.5	90	109	65	102	85	122	110	75	250	88	90	139	78
Instruction	55.8	1,232	109	84	109	97	111	104	91	104	89	90	93	114
Plant Operation & Maintenance	9.9	218	128	105	109	107	125	100	96	116	100	99	84	109
Fixed Changes	12.0	264	89	82	86	94	194	108	52	5	70	89	(1)	118
Attendance & Health	1.0	19	100	68	63	53	47	95	74	58	3	58	68	58
Transportation	4.0	81	91	99	109	128	167	158	116	102	156	81	105	139

Note: An "other programs" category under Total Expenditures and an "other pupil services" category including food services under Current Expenditures have been omitted.

(1) No data provided.

Source: National Center for Education Statistics, Digest of Educational Statistics, 1981 Edition, Table 66, pp. 76-77.

the relative differences in total expenditures. In terms of expenditures for capital and interest outlays, however, the relative index across the states indicates that some states, e.g., Michigan, Minnesota, and Nebraska, were carrying a much heavier finance burden for school building programs and debt retirement than other states, e.g., Iowa, Missouri, and Ohio. In considering current expenditures, the major component for instruction, which accounts for over half of current expenditures, exhibited less variation in expenditures across the states relative to the national average than did the other function categories. Certain exceptions are noted when considering expenditures across the states for the different function categories such as administration, plant operation, and fixed charges. For the administration function, which represents a modest 4.5 percent or $99 per pupil of total current expenditure, Indiana spent about two-thirds the national average, but Nebraska spent about two and one-half times the national average in 1978-79. For the Plant Operation and Maintenance function, both Illinois and Michigan were about 25 percent above the national average. The Fixed Charges category is marked by some extreme variation, particularly for Michigan and Nebraska. For attendance and Health, all midwestern states were below the national average, whereas for transportation, all but three midwestern states were above the national average.

Taking a closer look at instructional expenditures, this major budget component does exhibit considerable variation across the states if the data are disaggregated. The data in Table 18 highlight selected characteristics of the instructional staffs in the elementary and secondary schools during the 1980-81 school year in the midwestern states. In the United States, for example, there were 61.2 instructional staff members for every 1,000 pupils, and in the Midwest, this measure ranged from 71.4 in both Kansas and South Dakota to 50.0 in Michigan. Interestingly, all Great Lakes states except Wisconsin were below the national average, but all Plains states were above the national average for instructional staff members per 1,000 pupils. For the most part, the pattern established across the midwestern states when considering all instructional staff members per 1,000 pupils remained the same when considering classroom teachers and other staff members separately. Compared with other midwestern states, however, Ohio reported a high of 9.6 other staff members per 1,000 pupils, along with a below average number of classroom teachers per 1,000 pupils.

The average salary for all instructional members for the 1980-81 school year was $18,409, and the average salary for classroom teachers was $17,602. There was considerable variation in these salaries across the midwestern states, with average salaries in the Great Lakes states of Illinois and Michigan, for example, running about 25 to 30 percent higher than in the Plains states of Missouri, Nebraska, or North Dakota. Because of the large number of students in the Great Lakes area, this percentage difference in average salaries diminished when considering instructional salaries on a per pupil basis. The data in Table 18 also provide some insight to the particular mix of elementary and secondary teachers in a given midwestern state. For the country as a whole, the ratio of secondary teachers to elementary teachers was 1.20. Again there was considerable variation across the midwestern states, with Missouri (206) having more than twice as many secondary teachers as elementary teachers, and the states of Michigan (.98) and Wisconsin (.95) actually having more elementary teachers than secondary teachers.

TABLE 18

SELECTED CHARACTERISTICS OF INSTRUCTIONAL STAFF
1980/81 SCHOOL YEAR

	U.S.	IL	IN	IA	KS	MI	MN	MO	NE	ND	OH	SD	WI
Instructional Staff per 1000 pupils of which:	61.20	60.60	56.90	68.70	71.40	50.00	65.80	66.90	67.80	69.40	60.50	71.40	66.70
Classroom Teachers	53.70	54.30	50.30	62.90	63.50	43.10	58.40	58.00	59.90	61.20	50.90	63.20	64.00
Other Staff	7.50	6.30	6.60	5.80	7.90	6.90	7.40	8.90	7.90	8.20	9.60	8.20	2.70
Avg. Salary Instructional Staff	$18409	20150	17973	16610	15975	21012	18585	15994	15659	14356	17640	14410	17972
Avg. Salary Classroom Teachers	$17602	19425	17255	16131	15250	21213	17777	15421	14882	13865	16904	13674	17607
Instructional Salaries/ Pupil	$ 1127	1221	1023	1141	1212	1051	1223	1070	1062	996	1067	1029	1119
Exhibit:													
Elementary Classroom Teachers per 1000 Pupils	49.60	52.50	48.00	56.40	58.40	43.40	56.10	43.00	57.70	55.30	46.70	61.60	64.00
Secondary Classroom Teachers per 1000 Pupils	59.60	57.80	52.90	70.20	70.90	42.60	60.60	88.70	62.40	72.40	57.30	66.30	61.00
Ratio Sec./Elem. Teachers per Pupil	1.20	1.10	1.10	1.24	1.21	.98	1.08	2.06	1.08	1.31	1.23	1.08	.95

Source: National Education Association, Estimates of School Statistics, 1981-82 Edition, Table 5, p. 32, and Table 7, p. 34.

School Finance Reform

The 1970s represented a tumultuous decade in public school finance and several states across the country enacted new school finance programs during the period. In most states, the search for more equitable school finance programs was prompted by legal challenges, rapid inflation, declining enrollments, and demands for property tax relief. Influenced by these same pressures, all midwestern states reformed or substantially modified their school finance structures. Some of the states, such as Indiana, Iowa, and Minnesota, increased the level of their foundation program, and others such as Illinois, Kansas, and Michigan adopted variations of district power equalizing formulas.

Regardless of the specific reform measures adopted, the basic concern of state policymakers was to improve the equity or fairness of school finance systems, and thereby assure more equal educational opportunity. Although the notion of equity has many different dimensions, a primary goal of school finance changes during the 1970s was to reduce the large differences in expenditures per pupil which typically existed across school districts within a state. Differences or disparities of three- or four-to-one in expenditures per pupil across high spending and low spending school districts in a state were not uncommon, and at the extreme ends of the spending continuum, differences in expenditures per pupil even approached eight- or nine-to-one in some states. These disparities in expenditures per pupil were basically related to unequally distributed property wealth among school districts (rather than geographical price variations, for example), and most new school finance programs were designed to decrease the significant advantages that property-wealthy districts had always enjoyed. The basic idea behind most school finance reforms was to promote more equal expenditures per pupil by equalizing the tax bases of school districts, and thereby breaking the link between school district spending and local property wealth.

Several different standards and methodological procedures have been developed for evaluating the equity of a state's school finance system. A couple of statistics commonly used to assess the degree of expenditure inequality which may exist in a state include the coefficient of variation and the Gini index.

> The coefficient of variation, technically, is the standard deviation divided by the mean; it gives the percentage variation in expenditures per pupil about the average. The Gini index indicates the degree of variation from perfect equality. For both statistics, values close to zero indicate equality, and values closer to one indicate inequality (Odden and Augenblick, 1981, p. 7).

At the same time, a couple of other statistics--the simple correlation coefficient and the simple wealth elasticity--can be used to measure the degree of the relationship between school district spending and local property wealth. The correlation coefficient measures the strength of the relationship between expenditures per pupil and local property wealth per pupil. A value approaching zero indicates a weaker relationship, whereas a value approaching one indicates a stronger relationship. The simple wealth elasticity indicates,

> the percentage increase in expenditures per pupil associated with a one percent increase in property wealth per pupil. This measures the magnitude of the relationship. An elasticity close to zero indicates that school district expenditures do not change much with changes in wealth; a greater elasticity indicates that higher district expenditures tend to be found in higher wealth districts (Odden and Augenblick, 1981, pp. 8-9).

The data for 1977 in Table 19 present these four different statistical measures of equity for the school finance systems of the midwestern states. The coefficient of variation and the Gini index are used to measure the degree of expenditure per pupil equality, and the correlation coefficient and wealth elasticity are used to measure the degree of wealth neutrality. The data for 1977 in Table 21 permit relative comparisons to be made across the states with regard to their different rankings on the four different measures used.

In terms of expenditure per pupil inequality, the coefficient of variation and the Gini index for the country as a whole ranged from 24.9 to 7.3, and from 12.8 to 2.0, respectively. The states in the Midwest, for the most part, have high relative expenditure disparities when compared with other states across the country, and therefore did not do well on the two measures of expenditure inequality. In the Great Lakes area, Ohio had the highest expenditure inequality measures, with a coefficient of variation of 22.9 and a Gini index of 12.8, whereas Wisconsin had the lowest measures of 14.4 and 8.1, respectively. In the Plains area, Missouri had the highest expenditure inequality measures of 23.4 and 12.2, similar to those reported for Ohio, but Iowa had the lowest relative expenditure disparities with respective measures of 7.3 and 4.0. Of all the midwestern states, Iowa and Kansas ranked in the top third of the country for each measure of expenditure per pupil equality, and four states, Michigan, Minnesota, Missouri, and Ohio, ranked in the bottom third.

In terms of wealth neutrality, the correlation coefficient and the wealth elasticity for the country as a whole ranged from 0.85 to -0.06, and from 0.45 to -0.08, respectively. The states in the Midwest fared somewhat better on these equity measures than on the previous measures. In the Great Lakes area, Indiana had the highest correlation coefficient of 0.69, indicating a strong relationship between school district spending and wealth, and Wisconsin had the lowest of 0.09, indicating the lowest relationship. For the other wealth neutrality measure, Ohio had the highest wealth elasticity of 0.37 and Wisconsin had the lowest of 0.10. In the Plains area, Nebraska had the highest values for both measures of wealth neutrality (0.76 and 0.45, respectively), Minnesota had the lowest correlation coefficient (0.13), and Iowa had the lowest wealth elasticity (0.01). Of the midwestern states, Illinois, Iowa, North Dakota, and Wisconsin ranked in the top third of each measure of wealth neutrality, and Indiana, Missouri, Nebraska, and South Dakota ranked in the bottom third.

Iowa was the only state in the Midwest to rank high on measures of both expenditure equality and wealth neutrality. Compared with the other states across the country, Iowa has relatively low expenditure disparities across school districts and has effectively broken the link between school district spending and local property wealth. Two states in the Midwest, however, Ohio

TABLE 19

MEASURES OF EQUITY OF STATE SCHOOL FINANCE SYSTEMS
FOR THE MIDWESTERN STATES, 1977

STATES	Expenditure Inequality		Wealth Neutrality	
	Coefficient of Variation	Gini Index	Correlation Coefficient	Wealth Elasticity
GREAT LAKES				
Illinois	17.4	9.7	0.33	0.13
Indiana	15.7	8.8	0.69	0.28
Michigan	20.5	10.6	0.67	0.26
Ohio	22.9	12.8	0.58	0.37
Wisconsin	14.4	8.1	0.09	0.10
PLAINS				
Iowa	7.3	4.0	0.47	0.01
Kansas	14.1	7.4	0.73	0.23
Minnesota	18.6	9.9	0.13	0.19
Missouri	23.4	12.2	0.75	0.32
Nebraska	18.1	8.7	0.76	0.45
North Dakota	16.2	8.3	0.24	0.12
South Dakota	18.0	9.1	0.68	0.36
HIGHEST STATE	24.9	12.8	0.85	0.45
LOWEST STATE	7.3	2.0	-0.06	-0.08

Source: Odden and Augenblick, No. F79-9, 1981, Table 1, pp. 10-11.

and Missouri, ranked low on measures of both expenditure equality and wealth neutrality.

Individual State Profiles

In this section, individual profiles are developed for each of the twelve states included in the study, before discussing the future revenue prospects for these states in the coming decade. The profile for each state presents a brief historical perspective of the school finance system, as well as a discussion of any major school finance reform which may have occurred in the state during the last decade. The basic structure of its general school aid formula, whether it's a foundation program or a guaranteed tax base model, is identified, and a general description of how the formula works is included. The key features of the school finance system are discussed, and recent changes or amendments to the formula are mentioned. Finally, the possible implications of any recent litigation regarding the state's school finance system are explored.

Illinois

The State of Illinois significantly reformed its school finance formula in 1973. This new reform represented the first major change in school financing since the State adopted a Strayer-Haig foundation program in 1927. As in several states, the political climate in Illinois was favorable for school finance reform. There was concern about providing property tax relief, and also the need for additional state revenues, and in 1969, the legislature enacted individual and corporate income taxes. And a year later, in 1970, Illinois adopted a new state constitution. The new revenue from the income taxes provided the needed money for reforming school finance, and the new constitution, which specifies that "the State has the primary responsibility for financing the system of public education" provided a strong rationale for increasing the state support level to the schools. Throughout the legislative process, there was a great deal of concern about the cost of the new school finance reform, and the final appropriations bill for the new formula was $945 million.

The new 1973 formula, a guaranteed tax base program called a resource equalizer, specified different guaranteed assessed valuations and different maximum operating tax rates for each type of school district, i.e., elementary, secondary, and unit districts. The new formula guaranteed a certain expenditure per pupil (combined state and local dollars), and also encouraged higher local tax rates by rewarding tax effort with more state aid. This "reward for effort" provision, however, was eliminated by the legislature in 1980. Since the new formula was adopted, the legislature has gradually increased the guaranteed assessed valuations, as well as reduced the qualifying operating rates for the different types of districts. In 1981, the legislature increased the guaranteed assessed valuations in the different types of districts to provide a support level of approximately $1,470 per pupil (combined state and local dollars).

As part of a legislative compromise, the new school aid law in 1973 also permitted districts to use a Strayer-Haig foundation option, or a couple of different alternatives under this option, to calculate their state

aid entitlements if they wished. From 1973 to 1980, school districts could calculate their state aid entitlements under any one of four different options, choosing the one which generated the most state aid dollars for them. Over the years, however, only a limited number of wealthy districts exercised any of the Strayer-Haig options. For the 1979-80 school year, for example, 77 percent of the State's 1,013 districts used the resource equalizer formula, accounting for 98 percent of the general state aid distributed. In 1980, in addition to eliminating the reward for effort principle, the legislature also placed all school districts under the resource equalizer formula.

The original 1973 legislation also contained a variable weighting factor for Title I pupils based on the ratio of the concentration of eligible pupils in the districts to the concentration of such pupils throughout the State. Originally, this Title I weighting factor ranged from .375 to .750, but this range has been gradually reduced over the years, and in 1981 the range was set by the legislature at .500 to .675. In addition, the Illinois school aid formula also allocates aid by specifying weights for different grade levels--kindergarten (.5), elementary (1.0), and secondary (1.25). The original school aid legislation also contained a cost control factor which placed a 25 percent limitation on the increase in state aid each year. In 1978, this limit on annual increases in state aid was increased to 35 percent.

Over the years, school aid changes in Illinois have been carefully monitored by Alan Hickrod and his colleagues at Illinois State University. Because of Hickrod's work, Illinois is one of the few states for which longitudinal studies of the effects of school finance reform measures are available. These researchers found that Illinois essentially made progress toward the established equity goals of less expenditure disparity between school districts and greater wealth neutrality for a period of approximately four years, from 1973 to 1976. They reported that much of the ground gained during this period, however, was lost from 1976 to 1978, concluding that this reversal in equity trends had resulted in the loss of all the gains that had been made with regard to expenditure disparities in the bulk of Illinois' school districts, and some of the gains that had been made with regard to wealth neutrality (Hickrod, Chandhari, and Hubbard, 1979).

In a recent report, Hickrod and his colleagues (1981) explore and discuss this theme of reformation and counter-reformation. In commenting on their recent findings, they note,

> If simple disparity between districts is used, then the results are rather grim. If, however, wealth neutrality is used, then all the gains have not been lost. At the end of the time period, it can be said that revenues are not as much a function of local wealth as at the beginning of the time period, but it does appear that the tide is beginning to run against this gain as well.

This trend in diminishing equity gains, for the most part, parallels the trend in decreasing levels of state support during the last four years. In FY 76, state revenues accounted for 48.2 percent of school funding; in FY 78, the state share declined to 44.3 percent, and in FY 80, the state share dropped to 42.3 percent.

Indiana

Otis Bowen promised property tax relief as he campaigned for governor in 1972, and after his election, the Indiana legislature restructured taxes, providing a 20 percent indirect property tax credit for taxpayers which was paid to local units by the State. By increasing sales and corporation taxes, the legislature had the State compensate for the loss of revenue to the schools caused by the property tax relief measures (Byron, 1978, pp. 423-33). In 1978-79 the State provided approximately 53 percent of the state-local revenue for public schools, and an estimated $155 million to offset the 20 percent property tax reduction (Tron, 1980, p. 120). By freezing the level of school general fund property taxes at the 1974 level, the legislature earmarked the State to supply the difference. The property tax relief measure has affected the fiscal growth of the State by limiting the revenue raising ability of local governments and therefore slowing fiscal growth in general (Zorn, 1981, pp. 8-11). The 1973 measure also shifted the relative reliance placed on the State's major taxes. In 1972, property taxes accounted for almost 61 percent of major tax revenue, whereas in 1980, this figure had declined to less than 40 percent (Huie, 1981, p. 24).

Indiana has a foundation type school finance program with state aid based on a formula involving teacher training ratios, average daily memberships (ADM), and special programs. A 30 mill minimum local levy on the frozen 1974 valuation is required for participation in the program. Because of the local property tax freeze, the State has increasingly assumed a higher support level for the public schools, and state aid per pupil, for example, doubled between 1972-73 and 1976-77. In 1980-81, state revenue accounted for 59.7 percent of public school revenue.

Almost all school districts have supplemented the basic grant formula, which has allotted inadequate revenue amounts, by "adding a fixed per pupil amount to the previous year's entitlement since that calculation produces more funds than are generated by the formula" (Indiana School Finance Study, p. 4). Since the 1973 legislation, a school corporation could increase a base General Fund tax levy by appealing to the School Property Tax Control Board which in turn could make a recommendation to the State Board of Tax Commissioners or to the local corporation to hold a referendum. In 1982, a school corporation could "levy an additional amount equal to .0015 times the 1981 payable 1982 assessed valuation" and "increase the General Fund levy to take into account an increase in assessed valuation from 1981 to 1982."

This tax ceiling for the general fund is called the Maximum Normal Tax Levy (MNTL) and becomes a part of the local district's tax levy for 1982 and the following years (Indiana Department of Public Instruction, 1981, p. 3). In calendar year 1982 each school district was ordered to decrease its cumulative building fund rate by 15 cents per each $100 of assessed valuation. For 1982 and 1983, a school distribution formula has been established which includes each school corporation receiving the previous year's amount for its regular program plus $55 per pupil in average daily membership plus 2 percent of that portion of its general fund budget attributable to its property tax levy plus the amount received from the State minus the school's MNTL (Summary Page). As with the past distribution formulas, this only applies for two calendar years, 1982 and 1983. The limited ability of local governments to

raise taxes, declining public school enrollments, and the inability of the current formula to distribute revenue to high effort and needy districts are issues facing policy makers and taxpayers in Indiana in the coming years. The legislature and state education consultants are examining school finance options that would be based on tax effort rather than on local ability.

Iowa

Iowa's adoption of its present school finance law in 1971 marked the culmination of a series of legislative changes in school finance which began in the mid-1960s. The 64th General Assembly established a foundation aid program for financing public schools which featured a uniform tax levy requirement, a state foundation base, maximum budget growth, an equalizing mechanism for district spending, and a minimum state aid based on student enrollment. All districts contribute $5.40 per $1,000 of valuation, with state aid equalling the foundation level times the district's weighted enrollment minus the local contribution (Iowa Department of Public Instruction, 1981, pp. 1-6).

Beginning with the 1973-74 school year, the state cost was allowed to grow from the preceding year by multiplying the state cost by the percent change in the consumer price index, or more recently, by the gross national product implicit deflator. Allowable growth for 1981-82 was 5 percent, and for 1982-83, 7 percent. The state foundation base was set at 70 percent of the state cost per pupil in 1972-73. This base was intended to increase by 1 percent per year until it reached 80 percent. In fact, the foundation base was frozen at the 77 percent level through the 1982-83 school year. For 1981-82, for example, state aid equalled ($1,940 x 77 percent) minus $5.40/$1,000 x Assessed Valuation or (State Cost x Percent of Support) minus Uniform Levy (Iowa Department of Public Instruction, 1981, pp. 6-7).

State cost determines the dollar amount of allowable growth and the foundation support level. The school formula has allowances for a $200 minimum aid as long as that amount will not cause an increase in the controlled budget or a levy less than the $5.40/$1,000 assessed valuation. In 1978-79, 18 out of the 447 school districts were minimum aid districts. The pupil weighting factor includes compensation for declining enrollment (397 districts received such aid in 1978-79) and special education weighting from 1.7 to 4.0 among its components. An enrichment levy allows districts to vote for an increase of up to 10 percent in the state cost per pupil in areas such as curriculum, educational research, and innovative programs.

While property taxes provided 56.3 percent of the school budget in 1970, that amount declined to an estimated 36.1 percent in 1980-81. State aid concurrently increased from 27.8 percent in 1970-71 to 44.3 percent in 1980-81. Yet as schools are becoming increasingly dependent on state aid, the availability of state aid in Iowa is now decreasing. In 1981, the State reduced all state support by 4.6 percent. Diminishing state revenue and rapidly declining public school enrollment are two major factors to consider in Iowa's future school revenue projections.

Kansas

In 1973, Kansas enacted The School District Equalization Act (SDEA) to replace its school foundation program. Since then the Act has been in a state of flux as new amendments have been added with each succeeding legislative session. In 1981, a more significant change occurred in the form of a new finance formula proposal under which each district would have a basic budget level and would receive state support after deducting money from a uniform property tax levy, 85 percent of income tax rebate, and P.L. 874 (federal aid to federally impacted areas) receipts. In 1981-82 a budget controls amendment actually reverted to the 1973 Act Levels which stated that "a school district could increase its general fund budget per pupil up to 115 percent of the amount it budgeted per pupil for the preceding year or 105 percent of the median budget per pupil for the previous year of districts in its enrollment category, whichever was lower" (Memorandum, June 23, 1981, p. 1).

Michigan

Rapid inflation, property tax referenda defeats, and the near closing of the Detroit public schools served to focus considerable attention on problems inherent in the State's school foundation program. The Bursley Act, named after the Senate Education Committee Chair at the time, initiated Michigan's school finance reform in 1973. Republican Governor William Milliken had called for school reform since taking office in 1969. In that year, he appointed and chaired a commission which recommended full state funding of education with a statewide property tax and also the elimination of the elected State Board of Education. Milliken's proposals and continuous change of tactics were rebuffed, but with increased Democratic control of the Michigan House after the 1972 elections, he was able to negotiate a school reform package capable of receiving approval. Bursley introduced a modified power equalization measure which still had trouble passing in the House, but after much political maneuvering, a greatly compromised version became law in 1973. The State chose to allocate state aid to local school districts in response to the tax effort demonstrated by the local district.

Furthermore, during the same 1973 session, the legislature appropriated emergency funding for Detroit's schools and additional property tax relief for the poor. Because of a significant surplus in state revenue, a state tax reduction was also passed. The large budgetary surplus existed because of several factors. First, there was rapid economic growth during this period which meant increased state revenues. Second, because of inflation, property values were also rising which provided more local property tax revenues for the schools. The State's equalized property valuation increased over $3 billion, translating into an additional $160 million for education. Third, federal revenue sharing funds provided Michigan with an additional $250 million a year beginning in 1972 which could be used to support education. And finally, a lottery was instituted in 1972 which produced an additional small amount of revenues for the schools (Ostrem and Smith, 1976, p. 83).

The goal of Michigan's school finance reform has been to provide equal dollars for equal local tax effort and to eliminate fiscal disparities resulting from differing property tax bases. A secondary goal has been to reduce the spending gap between high and low spending districts. In 1975-76,

the state formula provided a guarantee of equal state dollars for equal school millage levied by a local district and a $40 per pupil for each mill guarantee with no limit on the amount of reimbursable millage (Ostrem and Smith, 1976, pp. 81-82).

The 1978 State Aid Act provided a guaranteed yield (combined state and local funds) of $1,464 per pupil to those districts levying 30 mills for school operations. The formula provided state funding of $274 per pupil plus operating mills levied through 30 mills multiplied by the difference between $40,000 and the district's state equalized valuation per pupil. In 1980-81, a recapture mechanism of the State Aid Bill deducted from the categorical aid of out-of-formula districts (13.4 percent) an amount equal to the district's local revenue which exceeds the DPE guarantee. The deduction may not be over 50 percent of a district's categorical aid. Categorical grants provide money for municipal overburden, vocational education, compensatory education, experimental projects, reading support, problem juvenile programs, and others. Including this revenue in the DPE formula should bring about more equity in Michigan's public school finance because a greater proportion of the revenue is being distributed under the DPE formula (Phelps and Addonizio, 1981, pp. 78-79).

In 1978-79 the State provided about 43 percent of the state-level revenues for the public schools. State funds are derived almost equally from the School Aid Fund and annual appropriations. The School Aid Fund revenues are derived from 60 percent of the 4 percent state sales tax, and taxes on cigarettes and hard liquor. The local share of the basic membership formula for school funding is the local property tax levy, which is calculated by multiplying district operating mills levied through 30 mills times the district equalized valuation.

Because of a large budgetary surplus in the early 1970s, Michigan had no problems financing reform. The largest circuit breaker program in the country brought tax relief, and all Michigan citizens enjoyed reduced taxes. Since that time the recession and its effect on the auto industry and allied industries have plummeted Michigan to experiencing the worst decline in state revenues of the fifty states. In 1980-81, educational aid was reduced 11.4 percent and categorical programs were reduced 30 percent of 1979-80 levels (Odden and Augenblich, 1981, p. 22). Certain cities basically dependent on the auto industry such as Pontiac had jobless rates in 1981 over 20 percent. Voters in that once-prosperous city with over 17,000 school pupils rejected eight straight millage proposals between 1979-81. They finally approved a tax proposal in December, 1981, which enabled the schools to remain open. Several other Michigan school districts are operating on skeleton budgets and waiting for the State's economy to reverse its decline.

Minnesota

As one of the first states to institute school finance reform, Minnesota received national attention with its 1971 Omnibus Tax Bill. Up until the reform, the gap between the median cost of operating the schools and the foundation aid level set by the legislature had been steadily widening. The progressive reform aimed to increase the State's contribution to district revenue by significantly raising the foundation aid level and by placing a

ceiling on the number of mills a school district could levy against local property wealth. The reform actually did lower property taxes by transferring 70 percent of school oeprating costs to state revenue (Ostrem and Smith, 1976, p. 80). To illustrate the shift from reliance on the local property tax to other sources of state revenue, the level of state support increased dramatically from 43 percent in 1970-71 to 70 percent in 1972-73 (Lovett and Mueller, 1978, p. 454, 459).

A tax relief proposal made by Wendell R. Anderson as he was campaigning for his first term as governor was implemented in 1971 after his election, but only after much partisan conflict between Anderson's Democratic-Farmer-Labor (DFL) party and a conservative faction of Republicans. Anderson had campaigned on a pledge to try to have the State assume the full cost of education, but a slight conservative margin in the house and senate vehemently opposed the potential increase in millage and loss of local control. Finally, marathon sessions of a special legislative committee reached a compromise acceptable to both parties. The major objective of the reform was to provide property tax relief and general tax reform. In 1973, with Anderson's support and a now DFL-controlled house and senate, the reform was extended, emphasizing equalization of state-local expenditures. In that year the legislature appropriated more than double the amount of state support than it had for the 1969-71 bennium.

Presently, the Minnesota foundation aid formula is based on pupil units in two categories: weighted average daily membership (WADM) which accounts for over 90 percent of the total pupil units and Aid to Families with Dependent Children (AFDC). Kindergarten pupils are weighted at .5, grades 1-6 at 1.0, and grades 7-12 at 1.4 pupil units.

The 1980-81 Minnesota Foundation Program incorporated recent changes which extend the shared state-local funding to most components of the program. While previously shared state-local funding had been limited to only the basic foundation aid and levy, the 1980-81 foundation program expanded shared funding to include: (1) a discretionary aid and levy which allow districts to supplement the basic levy up to one-half mill. Districts levying the full one-half mill are guaranteed $27.50 per pupil unit, (2) the grandfather maintenance levy, which provides state aid to districts with grandfather levies if their adjusted assessed property valuation per pupil unit is below the state average; and (3) a replacement aid and levy, which extends the shared state-local financing to adjustments due to enrollment change and sparsity. Another source of additional maintenance revenue is the referendum levy which allows Minnesota school districts to levy any amount per year as proposed on the ballot. About a quarter of the districts have passed these referendums.

State aid provides 65 percent of the foundation program revenues and local levies provide 35 percent. The basic foundation formula provides 77 percent of the overall foundation program. The 1980-81 Foundation Aid and Levy provided a guaranteed basic maintenance revenue from the sum of the local basic maintenance levy and state basic foundation aid. For 1980-81, the formula allowance was $1,265 and the basic maintenance tax rate was 23 mills, a reduction from preceding years, which was intended to preserve the relative share of state and local revenues in light of escalating property values. For a district levying the full allowance basic maintenance tax of 23 mills the

formula is Basic Foundation Aid = ($1,265 x pupil units) (1.023 x EARC valuation). EARC is the adjusted tax base valuation in Minnesota after the Equalization Aid Review Committee normalizes the assessment procedures of each local assessor (Minnesota Department of Education, 1980, pp. 19-20). In addition to the Foundation Aid Program, Minnesota has distributed categorical aids to local schools in such areas as pupil transportation, special education, and secondary and post-secondary vocational education. In 1978-79, special education was allocated 7.91 percent of the state funds for education, and transportation aid amounted to 7.93 percent of total state education revenue.

Minnesota school finance has undergone major restructuring and reevaluating in the past decade. The regressiveness of the property taxes before the 1971 reform caused legislators to look to state revenues as a source of equalizing expenditures and opportunities among the State's school districts. Declining enrollment, rapid inflation, and rising agricultural property valuation all have been major factors in the continuous refinements toward balancing the school finance system over the decade. Minnesota's reform illustrates that revenues for school finance changes can be generated efficiently by a state tax system. While the State provides about 70 percent (1978) of the revenues, it plays a relatively small role in local school decisions. Now that the State provides much of the revenue for schooling, however, the legislature must carefully balance education's piece of the budget with other public expenditures. Local school boards are now much more removed from lobbying activity and the locus of financial power. A Governor's Task Force on Education study is now being completed, one focus of which is the state/local funding mix and a possible need to increase the local role.

Missouri

In 1977, the Missouri legisture passed House Bill 131 which significantly revised the school foundation formula. The new school finance structure consists of two equalization formulas: a minimum foundation provision which guarantees each school district a specific level of revenue per pupil, and a guaranteed tax base provision which provides increased state aid to districts which spend beyond the foundation amount through increased tax effort. This school finance system attempts to provide greater equity in the distribution of state money and to adapt to the changing economy with certain built-in flexibility mechanisms.

The foundation formula provides every school district a basic amount of money for the cost of each student's education. The foundation state aid is equal to the minimum guarantee minus the required local contribution. The minimum guarantee is based upon a State Expenditure Factor (SEF) which is calculated each year by the State Department of Elementary and Secondary Education. Pupil eligibility is a combination of average daily membership and average daily attendance divided by two. In computing local school districts' minimum guarantee, an income factor is used along with a district's property wealth. Districts are required to levy a property tax rate of 57 percent of the state determined pupil weighted levy (Odden, 1978).

In addition to the Minimum Guarantee Formula, Missouri's school finance plan has a Guaranteed Tax Base (GTB) Add-On which provides additional general

state aid for poor to average-wealth districts who tax themselves higher than the required local rate in order to spend above the Minimum Guarantee. In 1978-79, the guaranteed tax base of $29,532 was the assessed valuation per eligible pupil of the school district which contained the 86th percentile of eligible pupils of the State. In 1981-82, the 90th percentile was used. The GTB Add-On assures that school districts taxing above the required level will have a relatively high tax base. It also reduces disparities due to district wealth when local districts tax above the mandated tax rate. This aid enables poorer districts to keep up with their richer neighbors in generating additional educational revenues.

In 1980, the State Board of Education appointed a broad-based committee to study the effects of the 1977 school finance reform. The committee concluded that the short-range financial outlook for the schools was gloomy due to inflation, the declining value of teacher salaries, the increasing number of districts with financial problems, the difficulty of raising property tax levies, and the inability of the State to provide revenue to help districts maintain programs. On the brighter side, the new formula has been successful in reducing expenditure disparities among districts, and in the four years succeeding its implementation in 1977-78, appropriations for the foundation program increased 60 percent or about $255 million. Among the committee's recommendations for the future are an increase in the sales tax, a district cost-of-education index, and a three-year eligible pupil average for those districts with enrollment declining faster than the state average (Missouri Department of Elementary and Secondary Education).

Nebraska

The Nebraska legislature enacted the State's first general school aid provision--the School Foundation and Equalization Act--in 1967. At that time, the legislature appropriated $25 million for the program, and an additional $10 million was added in 1970 to the program. In 1973, the legislature used federal revenue sharing funds to increase the State's school aid package to $55 million. Legislative sessions in 1975 and 1977 increased the State's level of support to the schools, but both these increased appropriations for education were placed before the people after the petition drive, and each time the referendum was defeated. State funding for the schools, after remaining at 55 million for several years, was increased to $95 million in 1980 (The League of Women Voters of Nebraska, 1981, p. 4).

Nebraska's school funding is based on a Strayer-Haig-Mort foundation-type program which consists of three basic levels: foundation aid, incentive aid, and equalization aid. Funds are distributed across these three levels on a priority basis, with foundation aid accounting for the major portion of the funds. The foundation funds take the form of minimal flat grants per ADM which in 1981 varied from $17.50 per kindergarten child to $49.00 per high school student. School districts have to levy a required local tax effort based on district classification before becoming eligible for incentive grants or equalization aid. Incentive aid is distributed to school districts on the basis of teacher preparation, e.g., $250 for each teacher with a master's degree, and on the summer school program, e.g., $18 for each student completing a 90-hour summer school program. Equalization aid is allocated to districts with higher mill levies and lower property assessments in an attempt

to equalize educational opportunities and tax burdens across the State resulting from unequal tax bases (Hudson, 1978, pp. 478-481).

For the most part, there has been only limited funds available for equalization aid once foundation and incentive aids have been appropriated. The formula is designed, however, to provide for a basic level of support referred to as "assumed needs" which are established by law and range from kindergarden ADM $225 to Grades 9-11 $ADM 550. The school aid plan also includes weighted pupil units based on sparsity, transportation, gifted and deprived pupils, and membership growth (Hudson, 1978, pp. 478-481).

In Nebraska the State has assumed major responsibility for the funding of special education. Based on legislation passed in 1973, the State must pay 90 percent of the "allowable" handicapped per pupil cost in excess of the normal per pupil cost. Transportation of the handicapped is also fully funded by the State. The district is reimbursed based on the previous year's reimburseable expenditures. Prior to 1978-79, the State did not have sufficient funds to provide the total allowable amounts to districts, and the funding level was closer to 80 percent than to the authorized 90 percent level. In recent years, approximately 15 percent of state school finance has been allocated to the special education fund.

Finally, Nebraska has over 1,000 school districts organized by different classes based on population and instructional programs offered. There are special laws and different requirements for each school district classification. Although one-half of the State's students are enrolled in the sixteen largest districts, about 500 one-room school houses still exist. Contrasted with large systems such as Omaha and Lincoln, the tax bases of these small rural districts can vary on a per pupil basis by hundreds of thousands of dollars. Hudson (1978, pp. 485-486) has offered some recommendations for further equalizing educational opportunity in Nebraska. Hudson, for example, suggests that a major effort be made to expand program offerings in isolated schools, and to consolidate school districts when feasible. He further recommends that the State employ more accurate measures to determine property values, and that the State establish "assumed needs" at levels that will provide an adequate program under the state aid formula.

North Dakota

North Dakota adopted a foundation program for financing its public schools in 1959. The statute included a weighting system which favored schools with lower enrollments and higher costs (Technical Report Number Two, pp. 1-2). Unlike most states, North Dakota combined state, county, and local sources in the dollar distribution formula. Other than increasing the dollar amount, the foundation program did not undergo change again until 1973. Prior to that year, a school financial crisis motivated a legislative committee to recommend a "fair-share" bill which was defeated by the 1971 Legislature. As financial difficulties continued, an interim committee on education conducted a comprehensive study of the State's educational finance system.

Growing out of the committee's report came Senate Bill No. 2026, a plan for the improvement of expenditure equalization and for a major revision in the public finance program. Major features of the bill were increasing state

appropriations from $54 million in 1971-73 to over $118 million in 1973-75; increasing base pupil support from $260 to $540 per pupil which would equal about 60 to 75 percent of the cost of education; adjusting school weighting factors; incorporating a 20-mill school district equalization factor into the formula in addition to the mandatory 21-mill county levy; subtracting a portion of federal impact aid received by school districts from the state payment to those districts receiving the funds; increasing school busing payments; reducing the maximum mill for high school districts from 34 to 24 mills; and requiring that eligibility for foundation program payments include adding no new courses of study without unanimous school board approval, with a few exceptions.

The 1975 Legislature made the concepts of Bill 2026 permanent in addition to modifying several areas, including changing weighting factors and increasing base payments from $540 to $640 in 1975-76 to $690 in 1976-77. These payments continued to increase, reaching $850 per pupil in 1978-79. In that year, "2026" underwent another study which led to further modifications in the current foundation program, the so-called "County Equalization Fund." The 1981 Legislature eliminated the counties' 21-mill levy, which had supplied 8.4 percent of foundation dollars in 1976-77, by transferring that levy to the State, but retained the 20-mill equalization factor. Weighting factors continued to compensate for population sparsity. A 6.5 percent oil and gas production tax was instituted whereby 45 percent of collected funds were allocated to the school districts on the basis of average daily attendance (School Finance Bulletin, 1981, p. 4).

Ohio

The School Foundation Program was Ohio's school finance plan for forty years (1935-75). In 1971, partly from the need for additional state aid for the schools, a Ohio state income tax passed the Ohio General Assembly amid much political debate. The additional state funds the tax generated led to a revision of the foundation formula over the succeeding four years, and in 1975, the General Assembly adopted an equal yield formula. The formula is a district power equalizing (DPE) plan which aims to guarantee an equal amount of funds per pupil for each district with the same tax rate (Biles and Ward, 1981b, p. 17).

In 1976, a class action suit challenging the new law was filed by the Cincinnati School Board in Cincinnati vs. Walter. A Hamilton County Court and later an Ohio state appellate court found the school finance plan to violate the equal protection provision and the "thorough and efficient" education provision of the state constitution. These courts stated that Ohio's state aid should not depend on local tax effort or the tendency or not of taxpayers to support education through taxing, since the tax effort was more a reflection of the socioeconomic status or wealth of a district than of voter support for education (Biles and Ward, 1981b, p. 17). In June of 1979, the Ohio Supreme Court upheld the equal yield formula. The court said local control "provides a rational basis for supporting the disparity in per-pupil expenditures" and does not violate the equal protection clause or the thorough and efficient clause because all districts do not lack teachers, buildings, and equipment, and none are starved for funds. The plaintiffs argued that "conditions of educational deprivation exist in more than half of Ohio's school

districts" and "only substandard educational services are delivered to the overwhelming majority of the pupils." An appeal is now pending in the U. S. Supreme Court (Biles and Ward, 1981b, p. 3).

Under the current equal yield formula, the State guaranteed $59 per pupil for the first required 20 mills in 1980 and $65 per pupil in 1981. For each mill levied beyond 20 up to a maximum of 30 mills, the State guaranteed an additional $42 per mill. A hold-harmless provision protects particular districts from changes in the formula by guaranteeing no less basic state aid than that received in specific previous years, namely the 1980 and 1981 levels of funding cannot fall below the districts' 1979 amount.

To participate in the basic support program, an Ohio district must tax at the rate of at least 20 mills, have a minimum number of school days per year (182) and adopt a teacher salary schedule under the state law. Within the Ohio school finance program categorical aid provides substantial amounts of state aid to most districts. Vocational education, special education, disadvantaged pupil impact aid, approved extended service, and transportation operating allowances all fall under the categorical program funding. In 1978-79, Cincinnati received 61.6 percent and Columbus 44.6 percent of all state aid from this funding source.

Ohio's adoption of a guaranteed yield plan aimed to allow each district to raise the same revenue per pupil as any other district with the same millage rate. It has failed to achieve this goal, partly because of two misconceptions. One is that the State failed to equalize more than the first 30 mills and credited all districts with 20 mills even if fewer than 20 mills were levied. Any millage beyond 30 was the result of local effort, and the wealth of the district became related to expenditures. Also, several provisions mandated minimum educational standards which poorer districts had no taxing authority and money to meet. Thus the gap between the poor and wealthy districts remained (Phelps and Addonizio, 1981, p. 74, and Wessel, 1978, pp. 268-270).

The declining economy, the school finance crisis, the dissent expressed in the court cases, and the embarrassment of school closings all point to a major overhauling of Ohio's school aid formula in the upcoming years. State aid to local school districts was reduced by 3.6 percent in FY 1981, and a budget deficit of nearly 500 million was anticipated. Over two-thirds of the districts do not participate in the guaranteed yield program (Odden and Augenblick, 1981, p. 22). Ohio's school finance system desparately needs to find new sources of revenue to remain afloat in the 1980s. Excessive property tax credits have narrowed the ability of the State to raise enough revenue from the property tax and have substantially contributed to the poor state of school finances. Increasing taxes in this low-tax state is an obvious major option for the future.

South Dakota

South Dakota reformed its school finance system in 1977 but delayed its implementation until 1982. In the interim, the new formula was revised to include a foundation type program based on classroom units rather than on weighted pupil units (Odden & Augenblick, 1981, p. 23). The 1982-83 min-

imum foundation program has two parts: general support or flat grant and equalization support. General support provides $2,000 for each classroom unit. Classroom units are groups of weighted students to allow smaller populated school districts to use fewer students to form a classroom unit than more largely enrolled districts. Equalization support is cost, which in 1982-83 is $21,100 per classroom unit, minus income.

Each district's income is determined by a required contribution of 13 mills on adjusted agricultural property value and 18 mills on adjusted nonagricultural property value plus the $2,000 for each weighted classroom unit, plus tuition receipts, interest from the permanent school fund, and fifty percent of the personal property tax replacement funds in the General and Special Education Funds (The Minimum Foundation Program 1982-1983). Additional revenue must come from local taxes and state and federal revenue. In 1980-81 the State provided approximately 28.1 percent of all public school revenue, the lowest state support level of the midwestern states after Nebraska. Approximately 86.7 percent of local revenue for schools came from property taxes and the remainder from rental income, interest on investments, sale of bonds, gross receipts taxes, and other sources (Selected Financial Facts 1980-81).

Wisconsin

In 1970, Democrat Patrick Lucey became Wisconsin's first four-year term governor. After putting together his first biennial budget which included some modest property tax relief measures, the Governor appointed a statewide task force on "Educational Financing and Property Tax Reform" in late 1971, and charged the group to study the possible alternatives and to make recommendations for shifting "the base of public school funding from the local property tax to other means of public support." The Governor accepted most of the task force's recommendations, and in early 1973 his controversial executive budget bill for the 1973-75 biennium included several significant school policy changes. After considerable political haggling, the legislature finally adopted in August, 1973 the Governor's budget bill which included a district equalizing school aid formula, complete with a recapture provision which was designed to assure equal educational spending for equal tax rates.

In late 1972, the State's unprecedented revenue surplus guaranteed substantial property tax relief. The magnitude of available revenue was such that the Governor's budget bill provided approximately one half billion in new property tax relief without a state tax increase. In addition to federal revenue sharing funds of $170 million, a dramatic upsurge in the State's economy resulted in a state revenue surplus of $138 million and anticipated revenue growth of $573 million. Lucey reasoned that the State's "windfall" revenue must be used as "double-duty" dollars, serving the primary goal of property tax relief while at the same time accomplishing significant policy objectives such as greater tax equity. Lucey proposed that the level of state funding for local school districts be increased by $349 million, increasing state support from 30 percent to 40 percent.

The school aid package passed by the legislature as part of the executive budget bill included a general school aid formula based on a two-tiered guaranteed valuation system, a recapture or negative aid provision, and a one-year

temporary cost control for school districts (the budget bill also included an expenditure control on municipalities as well). In addition, the new legislation placed all districts under the new equalization formula by elminating flat aid payments, and also mandated a set of minimum educational standards with which all districts would have to comply. The definition of shared (aidable) costs was also expanded to include the employer's share of teachers' retirement and social security payments, as well as debt retirement and annual capital outlay costs up to $100 per pupil.

The Wisconsin school finance reform was dramatic in that it required negative aid payments to the State from the property wealthy school districts, from local property tax collections, for redistribution to the property poor districts. As passed by the legislature after considerable compromising, only a handful of school districts would be required to make negative aid payments. In addition, the enacted negative aid payments were delayed until the 1976-77 school year, and then they were gradually phased in over a ten-year transitional period. These loser school districts continued their fight against the recapture provision, and ultimately the Wisconsin State Supreme Court ruled, in Buse vs. Smith in 1976, that the recapture provision of 1973 school finance reform was a violation of the State's uniform taxation code.

In order to assure property tax relief, the school aid package also included a one-year temporary cost control which limited spending increases per pupil during the 1973-74 school year to 5 percent of the previous year's statewide average expenditure per pupil. In addition, the permanent spending disincentive mechanism built into the two-tiered guaranteed valuation provision in the formula strongly discouraged excessive spending by sharply decreasing state aids once a district spent more than 110 percent of the prior year's statewide average cost per pupil. There was no direct cost control on school districts for the 1974-75 school year, but the legislature in 1975 adopted a permanent cost control measure which limits school district spending to 109.5 percent of its previous year's expenditure per pupil. Along with this permanent expenditure control, as with the earlier one-year temporary measure, the legislature provided for an appeal process through the Department of Public Instruction for exemption from the cost control under certain circumstances. In addition, school districts may exceed the cost limitation if they obtained the approval of the voters through the local referendum process.

During the latter 1970s, the Wisconsin general school aid formula has been reexamined and studied, but no new significant policy changes have been implemented. In 1976, for example, the State studied the possibility of using some measure of income to define more accurately school district wealth. Ahead of most states, Wisconsin does collect income data by school districts as part of the state income tax forms. In 1977, the State studied the excess cost formula it uses for special education aid, and in 1978, the problems associated with declining enrollments and increasing property values on school finance were considered. During this time period, the State's share of support for the elementary and secondary schools fluctuated slightly, but returned to the 40 percent level for the 1979-80 school year.

Future Revenue Prospects for the Public Schools in the Midwest

Overall, the economy of the midwestern states, with its large agricultural base and industrial base, performed very well during the growth years of the 1950s and 1960s, compared with other regions of the country. The midwest economy, however, performed less well during the stagnant 1970s, compared with other regional economies. In the last decade, the economy of the midwest region declined more during periods of economic downturns and grew less during periods of economic expansion than did the economy of the United States as a whole. Future revenue prospects for the schools will be significantly affected by the amount of future economic growth which occurs in the Midwest, and this rate of economic growth in turn will depend in large measure on how well the region is able to exploit its particular strengths and minimize its particular weaknesses. In this concluding section, future revenue prospects for the public schools in the Great Lakes states and the Plains states are explored, and some general overall conclusions for the 1980s are discussed.

Projections for School Revenues

One approach for estimating and comparing the future revenue prospects for the public schools in the Great Lakes and Plains areas, as well as in the individual states within each area, involves the calculation of selected elasticities of school revenues. Economists typically use elasticity measures to indicate how well a tax program reflects a change in ability to pay, and the concept developed by them to describe the responsiveness of tax yield to changes in income is referred to as "income elasticity of yield," which is defined as the ratio of the percentage change in the yield divided by the percentage change in regional or state income. The elasticity measures calculated in this study indicate the responsiveness or sensitivity of school revenues over the past decade to changes in state personal income. The elasticity coefficient indicates the percentage increase in school revenues associated with a one percent increase in state personal income.

The calculated elasticities of school revenues for the United States, and for the midwestern states, over the past decade are presented in Tables 20 and 21. The selected elasticity measure in Table 20 is the percent change in total state and local school revenues divided by the percent change in total state personal income. The elasticity coefficient for the United States as a whole for this measure for 1971-81 was .86 percent. Thus, on the average across the country, there was a .86 percent increase in total state and local school revenues for each one percent increase in total national personal income. Certain states in the Midwest--Indiana, Iowa, North Dakota and South Dakota--were considerably below the average elasticity coefficient for the country for the decade, whereas Nebraska was the only state considerably above the national average. These proportionate increases in state and local school revenues for a one percent increase in total national personal income for the country declined from .99 for 1971-76 to .85 for 1976-81.

This national pattern of declining school revenues during the latter 1970s is also evident in the midwest region, particularly in the Great Lakes area, but to a lesser extent. The elasticity coefficient for the Great Lakes area, for example, was below the national average for the early 1970s, but above it for the late 1970s. The elasticity coefficient for the Great Lakes

TABLE 20

SELECTED ELASTICITIES OF SCHOOL REVENUES FOR MIDWESTERN STATES

STATE	Percent Change in Total State-Local School Revenues Divided By Percent Change in Total State Personal Income		
	1971-81	1971-76	1976-81
UNITED STATES	.86	.99	.85
GREAT LAKES	.83	.94	.89
Illinois	.81	.96	.84
Indiana	.75	.86	.87
Michigan	.83	.85	.98
Ohio	.91	1.03	.89
Wisconsin	.84	.98	.86
PLAINS	.88	.94	.93
Iowa	.76	.93	.81
Kansas	.87	.85	1.02
Minnesota	.90	.94	.96
Missouri	.92	1.01	.90
Nebraska	1.09	1.04	1.05
North Dakota	.70	.80	.88
South Dakota	.79	.88	.89

Source: Author calculations based on school revenue data from National Education Association, Estimates of School Statistics, 1971-72, 1976-77, and 1981-82 Editions, and on personal income data from U. S. Bureau of the Census, Governmental Finances, 1970-71, 1975-76, and 1980-81 Editions.

area declined from .94 for 1971-76 to .89 for 1976-81, with the coefficients in Illinois, Ohio, and Wisconsin all reflecting this overall reduction. The coefficient for Michigan, on the other hand, increased, and for Indiana remained about the same. This national pattern of declining school revenues during the 1970s is not apparent in the Plains area. The elasticity coefficient for the Plains area remained stable, declining negligibly from .94 for 1971-76 to .93 for 1976-81, with an uneven pattern across the area. The elasticity coefficients declined for Iowa and Missouri, increased for Kansas and North Dakota, and remained about the same in Minnesota, Nebraska, and South Dakota.

The selected elasticity measure in Table 21 is the percent change in state and local school revenues per pupil divided by the percent change in state personal income per capita. The elasticity coefficients displayed in Table 21 are consistently higher than those presented in Table 20, reflecting the impact of declining public school enrollments, and the reduction in the proportion of pupils in the population in the Midwest. As indicated in Table 21, school revenues on a per pupil basis were much more responsive to increases in personal income per capita, with revenues per pupil increasing proportionately more than personal income per capita increases in most of the midwestern states over the decade.

The elasticity coefficient for the United States as a whole for this measure for 1971-81 was 1.08 percent. Thus, there was a 1.08 percent increase in state and local school revenue per pupil for each one percent increase in state personal income per capita. The Great Lakes area as a whole, and all five states within the area, had elasticity coefficients below the average elasticity coefficient for the country, whereas the Plains area as a whole, and a majority of the states within the area, had elasticity coefficients above the average elasticity for the country. Furthermore, although these proportionate increases in state and local revenues on a per pupil basis for a one percent increase in state personal income per capita for the country declined from 1.06 for 1971-76 to 1.01 for 1976-81, the elasticity coefficients for both the Great Lakes and Plains areas actually improved from .99 and 1.05, to 1.03 and 1.09, respectively, for the same periods. The most prominent displays of a reversal in the national trend in the decline in the elasticity coefficient for the country as a whole were found in Michigan, Ohio, Kansas, Minnesota, and Nebraska.

These calculated elasticity measures for the individual states can be used as a basis for making very subjective projections of school revenues for each state when combined with certain other related factors which have been examined previously. These other related factors basically include the individual state's tax capacities and tax efforts, as well as the impact on the individual states of past demographic and economic changes, particularly the effect on the individual states of any changes in personal income growth. These factors can then be combined with projected growth rates in personal income for the individual states which are presented in Table 22. Based on these data, very general statements can be made about the relative fiscal environment of a state, and hence about the future prospects for adequate school revenues in a particular state in the coming years.

TABLE 21

SELECTED ELASTICITIES OF SCHOOL REVENUES FOR MIDWESTERN STATES

STATE	Percent Change in State-Local School Revenue Per Pupil Divided by Percent Change in State Personal Income Per Capita		
	1971-81	1971-76	1976-81
UNITED STATES	1.08	1.06	1.01
GREAT LAKES	1.02	.99	1.03
Illinois	.99	1.00	.99
Indiana	.92	.92	1.00
Michigan	1.01	.90	1.13
Ohio	.85	.82	1.03
Wisconsin	1.07	1.05	1.02
PLAINS	1.15	1.05	1.09
Iowa	1.00	1.02	.98
Kansas	1.13	.99	1.14
Minnesota	1.17	1.01	1.16
Missouri	1.23	1.15	1.07
Nebraska	1.37	1.14	1.21
North Dakota	.94	.92	.98
South Dakota	1.06	1.00	1.02

Source: Author calculations based on school revenue and enrollment data from National Education Association, Estimates of School Statistics, 1971-72, 1976-77, and 1981-82 Editions, and on personal income data from U. S. Bureau of the Census, Governmental Finances, 1970-71, 1975-76, and 1980-81 Editions.

TABLE 22

PROJECTED AVERAGE ANNUAL REAL GROWTH RATES IN TOTAL AND PER CAPITA PERSONAL INCOME BY MIDWESTERN STATES, 1978 - 2000

STATE	Total Personal Income		Per Capita Personal Income	
	Average Annual Growth Rate	U.S. Average Annual Growth Rate = 100	Average Annual Growth Rate	U.S. Average Annual Growth Rate = 100
UNITED STATES	3.3	100	2.5	100
GREAT LAKES	3.0	89	2.5	99
Illinois	2.8	83	2.4	94
Indiana	3.3	98	2.6	104
Michigan	3.0	91	2.4	98
Ohio	2.9	89	2.6	103
Wisconsin	3.2	95	2.5	101
PLAINS	3.1	95	2.5	102
Iowa	3.0	89	2.5	100
Kansas	3.1	95	2.5	99
Minnesota	3.5	106	2.5	100
Missouri	2.9	89	2.6	103
Nebraska	3.1	92	2.5	102
North Dakota	3.2	95	2.6	106
South Dakota	3.1	94	2.7	109

Source: U. S. Department of Commerce, Survey of Current Business, "Regional and State Projections of Income, Employment, and Population to the Year 2000, November, 1980, Table 2, p. 47, and Table 3, p. 49.

Great Lakes States

With regard to individual states within the Great Lakes area, future prospects for school revenues in the 1980s, on a relative basis, appear to be best in Illinois and Wisconsin, not quite as good in Michigan and Ohio, and perhaps worst in Indiana.

Illinois. Illinois, primarily because of its wealth, should be able to provide for adequate school revenues in the 1980s. With a highly diversified economy, Illinois is considered a wealthy state with an average overall tax effort for all taxes. Per capita personal income in Illinois, however, declined from 117 percent in 1974 to 113 percent in 1980 as a percentage of the United States average. In addition, Illinois has the lowest projected growth in total and per capita personal income among the Great Lakes states. The State was able to balance its budget in 1980 and 1981 without a tax increase, although there have been service and program cuts. In order to balance its budget, Illinois did have to resort to a number of tactics to avoid tax increases such as shifting funds from one state account to another (using capital funds to pay for current operating expenses), and also delaying payments to local school districts. There is talk of restructuring the state income tax after the 1982 fall gubernatorial election.

For the last decade, the elasticity measures of school revenues in Illinois basically paralleled the average elasticity measures for the country as a whole. Because of its wealth, the State has been able to maintain considerably above average school revenues and expenditures in relation to the average for the country over the years. The percentage increases in school revenues per pupil in Illinois during the 1980s, however, lag considerably behind the average percentage increases for the country as a whole. In 1977, Illinois' school finance system ranked in the top third of the country on each of the wealth neutrality measures used, although there is now evidence that its school finance system is becoming less equitable. The state share of funding for the public schools, for example, declined nearly ten percent from 1976 to 1982.

Wisconsin. Wisconsin should also be able to provide for adequate school revenue throughout the 1980s. Wisconsin is considered a high spending state which historically has exhibited a high overall tax effort. Its slightly below average per capita personal income as a percentage of the United States average has fluctuated somewhat over the decade, but actually increased to 98 percent during the latter 1970s. At the same time, Wisconsin is projected to experience above average growth in both total and per capita income in the coming years. Wisconsin has had some difficulty in balancing its budget lately and there have been service cuts and some modest tax increases. Wisconsin depends very heavily on its progressive state income tax, and the indexation of the state income tax in 1979 may serve to constrain the growth of future tax revenues. In order to balance its budget recently, Wisconsin had to apply a surcharge to its state income tax.

Like Illinois, the elasticity measures of school revenues in Wisconsin for the 1970s paralleled those for the nation as a whole. The overall percentage increase in school revenues per pupil in Wisconsin during the 1970s was about 6 percent above the average percentage increase for the country as a

whole. Because of its high tax burden, the State has consistently maintained above average school revenues and expenditures over the years. The state share of school costs gradually increased in the 1970s, and remained relatively stable at about 40 percent from 1979 to 1982. In 1977, Wisconsin had the lowest scores of all Great Lakes states on all four equity measures used for evaluating the equity of a state school finance program, and ranked in the top third of the country on each measure of wealth neutrality.

Michigan. Michigan depends primarily upon the automobile industry for its economic well being. The nationwide recession in the mid 1970s and the early 1980s significantly aggravated the auto industry slump, and Michigan continues to experience severe unemployment problems. Consequently, the State experienced considerable difficulty in balancing its budget during the early 1980s. In order to avert projected budget deficits, the governor had to call special legislative sessions throughout 1982 to institute substantial budget cuts and also a temporary increase in the state income tax. Like Wisconsin, however, Michigan is considered a high spending tax with a high overall tax effort. Per capita personal income is still above the national average, but this figure declined from 109 percent in 1974 to 104 percent in 1980, as a percentage of the United States average. In addition, Michigan is projected for below average growth in total and per capita personal income in the coming decade. To further complicate matters, Michigan also adapted a constitutional revenue limitation in 1978 which limits state revenues to the prior year ratio of revenues to personal income.

The elasticity measures of school revenues for Michigan was considerably below the national average for the early 1970s, but considerably above the national average for the latter 1970s. The elasticity measures basically reflect the percentage increases in school revenues per pupil in Michigan during these periods. Because of its slightly above average tax wealth, and considerably above average tax effort, however, Michigan has above average school revenues and expenditures. In fact, its average expenditure per pupil increased from 114 percent in 1973/74 to 121 percent in 1978/79 as a percentage of the United States average. At the same time, the level of state support for the public schools has declined dramatically, nearly ten percent since 1975. This decline in state support seems likely to increase since a large portion of the state budget cuts in 1982 were sustained by the public schools. Michigan, on a relative basis, did not score well on the different equity measures used to evaluate the equity of the state school finance program. In 1977, the State ranked in the bottom third of the country on each measure used of expenditure per pupil equality.

Ohio. Ohio, like Michigan, struggled during the early 1980s to balance its state budget. In early 1982, the governor and legislature in Ohio were forced to take some action to avoid a projected record budget deficit of approximately $1.3 billion for the end of the fiscal year in July, 1983. During the summer, 1982, the legislature significantly increased state taxes, including an increased sales tax rate, and also a surcharge on the individual income tax. Ohio has average tax wealth, but traditionally has exhibited a considerably below average overall tax effort. The State has an average per capita income, but this figure declined from 102 percent in 1974 to 99 percent in 1980, as a percentage of the United States average. In addition, Ohio is

projected for below average growth in total personal income, but somewhat average growth in per capita personal income.

The elasticity measures of school revenues based on total school revenues and total personal income for Ohio for the 1970s were somewhat above the national average elasticities, where s those based on school revenue per pupil and personal income per capita wer somewhat below the national average elasticities. Because of its characteristically low tax effort, the State has considerably below average school revenues and expenditures. Despite the fact that the overall percentage increase in school revenues per pupil in Ohio for the 1970s was 6 percent above the average percentage increase for the country as a whole, the State's average expenditure per pupil during this period remained at about 87 percent of the United States average expenditure. At the same time, the State's share of school costs increased about ten percent from 1975 to 1980, but this trend may not continue since the education budget for the public schools was reduced on three separate occasions in early 1982. Ohio registered the highest scores on three of the four equity measures used for school finance systems of the Great Lakes states, and ranked in the bottom third of the country on both measures of expenditure per pupil equality and of wealth neutrality.

Indiana. Of the Great Lakes states, Indiana may have the most difficulty in generating adequate school revenues in the 1980s. Indiana has a slightly below average fiscal capacity but a considerably below average overall tax effort. At the same time, Indiana has a somewhat below average per capita personal income, but is projected for average growth in personal income in the coming years. In order to balance its budget in the early 1980s, Indiana had to make service cuts, and also increase some taxes, primarily on motor fuel and alcoholic beverages. The general slowdown in governmental taxing and spending is most evident in Indiana, and the State significantly reduced its tax burden during the 1970s. In Indiana, for example, state and local tax revenue as a percentage of personal income dropped from 11 percent in 1975, to 9 percent in 1980, a much larger decline than the average reduction across the country, and the largest percentage reduction of all midwestern states for this period. Similarly, per capita state-local tax collections increased from $580 in 1975, to $744 in 1980, representing a 5.1 percent increase, again a percentage increase considerably below the average percentage increase for the country as a whole, and the lowest percentage increase among all midwestern states.

In 1973, Indiana enacted legislation which froze property tax levies at the 1974 level for purposes of funding the public schools. Accordingly, the school finance system in Indiana has changed drastically during the latter 1970s. The state share of the cost for the public schools increased significantly from 43 percent in 1975 to 60 percent in 1980. The elasticity measure of school revenues based on total school revenues and total personal income for Indiana for the 1970s was considerably below the national average elasticity for this period, and the lowest elasticity measure among all Great Lakes states. Similarly, the overall percentage increase in school revenues per pupil in Indiana for the 1970s was about 25 percent below the average percentage increase for the country as a whole, and also the lowest pecentage increase of all midwestern states. Indiana has below average school revenues and expenditures with its average expenditure per pupil, for example, declin-

ing from 101 percent in 1969 to 84 percent in 1979 as a percentage of the United States average. Indiana's school finance system in 1977 had high wealth neutrality scores, and the State ranked in the bottom third of the country on these equity measures.

Plains States

With regard to individual states within the Plains area, future prospects for school revenues in the 1980s, on a relative basis, appear to be best in Iowa, Kansas, and Nebraska, not quite as good in Minnesota and Missouri, and perhaps worst in North Dakota and South Dakota.

Iowa. Given its somewhat above average tax wealth and somewhat below average overall tax effort, Iowa should be able to provide for adequate school revenues in the 1980s. The State has about average per capita personal income (97 percent in 1980) as a percentage of the United States average, and is projected for just below average growth in total personal income, but somewhat above average growth in per capita income. Iowa has no revenue or expenditure limitation provision at the state level, and depends heavily upon the personal income tax for state level revenues. In the early 1980s, Iowa managed to balance its budget, but did have to impose service and program cuts, and also some new taxes, i.e., increased taxes on motor fuel.

The elasticity measures of school revenues for Iowa were below the national average elasticity measures during the 1970s. The overall percentage increase in school revenues per pupil in Iowa for the decade were slightly below the average percentage increase for the country as a whole, with above average revenue percentage increases in the early 1970s, and below average revenue percentage increases in the late 1970s. During the 1970s, Iowa has maintained above average school revenues and expenditures, and the state share of the cost for the public schools increased modestly from 40 percent in 1975/76 to 43 percent in 1979/80. Iowa was the only state in the Midwest to rank in the top third of the country on both measures of expenditure equality and of wealth neutrality.

Kansas. Kansas, like Iowa, has above average tax wealth and a below average overall tax effort. Per capita personal income increased from 99 percent in 1974 to 105 percent in 1980 as a percentage of the United States average. In addition, Kansas is projected for just below average growth in personal income. Coming into the 1980s, Kansas enjoyed the healthiest state budget balances of any of the midwestern states. In 1982, for example, the State did not have to make any service or program cuts, or pass any new taxes in order to balance the state budgets.

The elasticity measures of school revenues for Kansas were above the national average elasticity measures for the 1970s, and considerably above the national average elasticity measures for the latter 1970s. This pattern is also apparent when considering the percentage increases in school revenues per pupil in Kansas during the 1970s. The overall percentage increase in school revenues per pupil in Kansas for the 1970s was about 20 percent above the average percentage increase for the country as a whole. This percentage increase in school revenues in Kansas was below the national average increase in the early 1970s, but substantially above the national average percentage

increase in the latter 1970s. Kansas has below average school expenditures and its average expenditure per pupil increased from 87 percent in 1973/74 to 97 percent in 1978/79 as a percentage of the United States average. Following the adoption of its 1973 school finance reform, the state share of the cost for the school increased dramatically from 31 percent in 1971/72 to nearly 50 percent in 1975/76, and then leveled off at the 50 percent level throughout the latter 1970s. In 1977, Kansas' school finance system received low expenditure equality scores, and the State ranked in the top third of the country on these measures.

Nebraska. If current trends in Nebraska with regard to school revenues and expenditures continue, the State should be able to provide for adequate school revenues in the 1980s. Nebraska has just below average tax wealth and a slightly below average overall tax effort. Per capita personal income in Nebraska increased from 90 percent in 1974 to 94 percent in 1980 as a percentage of the United States average. In addition, Nebraska is projected for about average growth in personal income in the 1980s. Nebraska had a projected budget deficit in 1981, and the State reduced spending about 2 percent in a special legislative session in the fall, 1981. In early 1982, the State was forced to enact taxes to overcome its revenue shortfall of approximately $50 million.

The elasticity measures of school revenues for Nebraska were extremely high for the 1970s, considerably above the national average elasticities, and by far the highest of all midwestern states. Similarly, the overall percentage increase in school revenues per pupil in Nebraska was approximately 50 percent above the national average percentage increase for the decade, and again the highest percentage increase of all midwestern states. During this period, Nebraska's average expenditure per pupil increased from 75 percent in 1968/69 to 99 percent in 1978/79 as a percentage of the United States average. The state share of school cost is very low in Nebraska compared with other midwestern states, and this percentage declined slightly from 19 percent in 1975/76 to less than 18 percent in 1979/80. Nebraska's school finance system in 1977 did not score well on the different equity measures used, and the State ranked in the bottom third of the country on each measure of wealth neutrality.

Minnesota. Minnesota, primarily because of its traditionally high tax effort, should be able to provide for adequate school revenues in the 1980s, although the immediate outlook for school revenues does not look good. Minnesota, with slightly above average tax wealth and a considerably above average overall tax effort, is a high spending state. The State has an average per capita personal income, and is projected for above average growth in total personal income and about average growth in per capita personal income. Minnesota, however, had projected revenue shortfalls in both 1981 and 1982, and had to both cut spending and increase taxes, including a 7 percent income tax surcharge to balance the state budget. The State held a number of special legislative sessions in 1982 to deal with a $1 billion revenue shortfall which was basically caused by declining income tax and sales tax revenues.

The elasticity measures of school revenues for Minnesota were above the national average elasticity measures for the 1970s. These elasticity measures in Minnesota, however, were below the national average elasticity measures

during the early 1970s, but above them during the latter 1970s. As expected, then, the overall percentage increase in school revenues per pupil in Minnesota was about 20 percent above the average percentage increase for the country as a whole during the 1970s, with a percentage increase below the national average in the early 1970s, but considerably above the national average in the latter 1970s. Minnesota has above average school revenues and expenditures, and its average expenditure per pupil was 107 percent in 1978/79 as a percentage of the United States average. Over the years, Minnesota has assumed a large portion of the cost for the public schools and the state share in 1979/80 was approximately 58 percent. This high state support level may be dwindling, however, since state aid to education was severely reduced in order to balance the state budget in the early 1980s. Despite Minnesota's high state support level, its school finance system in 1977 did not fare well in terms of equity, and the State ranked in the bottom third of the country on each measure of expenditure per pupil equality used.

Missouri. Missouri is likely to have difficulty in providing for adequate school revenues in the 1980s. Missouri has below average tax wealth and a considerably below average overall tax effort. Missouri's per capita personal income in 1980 was 94 percent of the United States average, and the State is projected for below average growth in total personal income, but slightly above average growth in per capita personal income. In 1982, the governor twice ordered state departments to cut spending by ten percent to keep the State's budget balanced. In addition, the State increased taxes on cigarettes and earmarked these increased revenues for the public schools. Missouri also has a constitutional revenue limitation provision which limits state revenues to the prior year ratio of revenues to personal income.

The elasticity measures of school revenues for Missouri were above the national average elasticity measures for the 1970s. The overall percentage increase in school revenues per pupil in Missouri was about 25 percent above the average percentage increase for the country as a whole for this same time period. Nevertheless, Missouri's school revenues and expenditures are considerably below average, with its average expenditure per pupil remaining at about 85 percent of the United States average expenditure throughout the 1970s. For the 1979/80 school year, Missouri assumed about 41 percent of school costs, and this percentage did not appear to be increasing in the early 1980s. Missouri's school finance system ranked in the bottom third of the country on both measures of expenditure equality and of wealth neutrality.

North Dakota. North Dakota is another state that is likely to have difficulty in providing for adequate school revenue in the 1980s. North Dakota has above average tax wealth, but an extremely low overall tax effort, the lowest of all midwestern states. Because of North Dakota's oil production and extraction taxes, per capita personal income has fluctuated substantially in the State as a percentage of the United States average. For example, per capita personal income was 78 percent in 1964, 102 percent in 1974, and most recently, 90 percent in 1980, as a percentage of the United States average. In the future, North Dakota is projected for slightly below average growth in total personal income and just above average growth in per capita personal income. In 1982, in the middle of a biennial state budget, North Dakota had a projected $130 million revenue shortfall, primarily due to lower oil production. In order to balance the state budget, the governor ordered

state agencies to cut spending twice, once by ten percent in late 1981, and once by five percent in early 1982.

The elasticity measures of school revenues for North Dakota were below the national average elasticity measures for the 1970s. The overall percentage increase in school revenues per pupil in North Dakota was just above the average percentage increase for the country as a whole for this time period. North Dakota has below average school revenues and expenditures, and its average expenditure per pupil ranged about ten to fifteen percent below the national average expenditure throughout the 1970s. Following the adoption of the 1973 school finance reform, there was a dramatic increase in the state support level for school costs, from approximately 33 percent in 1971/72 to nearly 53 percent in 1975/76. This percentage declined slightly during the latter 1970s, and may continue to decline gradually unless the State's revenue picture begins to turn around. In 1977, North Dakota's school finance program ranked in the top third of the country on each measure of wealth neutrality used.

South Dakota. South Dakota, like Missouri and North Dakota, will have difficulty in providing for adequate school revenues in the 1980s. South Dakota is the least wealthy of all midwestern states for tax purposes, and also has a considerably below average overall tax effort. Per capita personal income in South Dakota is about 40 percent below the United States average. South Dakota is projected for a slightly below average growth in total personal income and somewhat above average growth in per capita personal income. In 1982, the State ended the fiscal year with a small budget surplus, but agriculture was suffering because of high interest rates and low prices.

The elasticity measures of school revenues for South Dakota were below the national average elasticity measures for the 1970s. The overall percentage increase in school revenues per pupil in South Dakota was about the same as the average percentage increase for the country as a whole for the 1970s. South Dakota has below average school revenues and expenditures, and its average expenditure per pupil was about 20 percent below the national average expenditure throughout the 1970s. The state support level for school costs remains low in South Dakota, although this percentage did increase from 17 percent in 1975/76 to 23 percent in 1979/80. In 1977, South Dakota's school finance program ranked in the bottom third of the country on each measure of wealth neutrality used.

There is considerable variation on important fiscal characteristics across the midwest region, that is, across the two subregions--the Great Lakes area and the Plains area--as well as across the states within each of the subregions. While it would be hazardous to generalize across the region as a whole, it does seem reasonable to suggest that the states in the Great Lakes area as a whole may have a more difficult time generating tax revenues for the schools in the 1980s than the states in the Plains area as a whole. The Great Lakes states will probably experience less economic growth in the 1980s when compared with the Plains states. The Great Lakes area will continue to be affected by an adverse federal balance of payments, unlike the Plains area, and the Great Lakes area will also continue to decline in terms of relative personal income growth, again unlike the Plains area. The dramatic population shifts to the South and West, and the greater out-migration from the Great

Lakes area than from the Plains area, should serve to reinforce the likelihood of this scenario.

Basic Conclusions

As has been emphasized previously in this paper, potential revenue prospects for the public schools in the Midwest basically depend on the future outlook for the midwest economy as a whole. In turn, opportunities for economic growth in the Midwest will depend largely on the vitality and health of the national economy. If the national economy experiences a period of relative expansion and growth, the economies of the midwestern states will respond in a similar manner. Given this scenario, the midwestern states will be in a much better position to generate tax revenues, and thus to finance their public school systems. But even if the national economy enters a cycle of rapid expansion, and the midwest economy responds accordingly, the economic gains enjoyed by the midwest region probably will not be as significant on a relative basis as those gains enjoyed by other regions of the country, such as the South and West. Similarly, if the national economy continues its cycle of slowed economic growth, the midwestern states, in particular, can expect a continuing deterioration of the relative economic advantage they have always enjoyed over the regions of the country. Policy makers in the Midwest will continue to be confronted with difficult decisions regarding tradeoffs between cutting public services and increasing taxes.

Even if substantial economic growth is experienced during the 1980s, which does not seem likely, the numerous revenue and expenditure limitation provisions which were implemented by several states across the country during the 1970s should serve to constrain the future growth of the public sector, including revenues for the public schools. At the same time, if the economy continues in a sluggish manner, which does seem likely, these revenue limiting provisions may make it very difficult for states to raise the necessary revenues for even adequate public services. By 1980, in addition to the local level revenue limitation provisions which have traditionally existed throughout all midwestern states, four states--Michigan, Missouri, Minnesota, and Wisconsin--had enacted state level revenue limitation provisions as well.

It is difficult to estimate the effect that these revenue limitation provisions will have on state and local governments. In those states which have adopted constitutional provisions, the effects may be much more constraining and long term than in those states which have adopted statutory provisions. Certain states which have adopted statutory provisions, for example, such as Wisconsin and Minnesota, have already been forced to modify their tax relief provisions because of state revenue shortfalls. While these tax limiting provisions should serve to hold down revenues in those states which have adopted them, they may also serve to constrain revenue growth in adjacent states which have not adopted them. State legislatures these days remain very cognizant of what other states are doing, and, for example, are concerned that other states may gain an advantage in the competition for manufacturing firms because of reduced tax burdens. Also, although only four states in the Midwest had adopted provisions by 1980 to limit the growth in state level revenues, there is no way of determining which additional states, if any, may adopt such provisions in the 1980s. Both high tax effort states,

e.g., Michigan, as well as low tax effort states, e.g., Missouri, have adopted constitutional revenue limitation provisions.

If a prediction were to be made with regard to future prospects for school revenues in the Midwest based on trends and occurrences over the past decade, the prediction would have to be for a continued slowdown in school revenues in the coming years. Although school revenues increased dramatically in nominal terms during the 1970s, the rate of these increases began to decrease during the latter 1970s. Public school revenues began to decline in real terms for the first time around 1978, and many state budgets for the public schools were sharply reduced during the latter 1970s and early 1980s. Furthermore, some of the economic and demographic trends, such as continued slowed economic growth, the relative decline in personal income growth, and shifting populations, which have prompted or promoted this slowdown in school revenues in the Midwest, did not appear to be any less pronounced during the latter 1970s or early 1980s.

On the other hand, one prominent trend of the 1970s, that pertaining to the shifting sources of school revenues from the local to the state level, and the corresponding growing centralization of education, does not seem likely to continue throughout the 1980s. The cutbacks in federal revenues to the schools under the Reagan Administration will undoubtedly place greater fiscal pressure on the states during the 1980s. Since many states are having difficulty generating adequate state revenues, and thus experiencing problems in balancing their budgets, considerable pressure is being placed on local governments to increase their share of the financing of the schools. Already there is substantial evidence that state tax revenues are declining and local revenues are increasing in support of the schools. There may well be a reversal in the trend of increasing state support for the public schools in the 1980s.

During the early 1970s, because of economic growth, the advent of the federal revenue sharing program, and the adoption of state income tax laws, most midwestern states had ample available revenue. In fact, many of these states had unprecedented revenue surpluses in the early 1970s which were used to provide property tax relief and also to reform their school finance systems. During the late 1970s and early 1980s, however, much of the ground that had been gained in terms of property tax relief and school finance reform was lost, and in marked contrast to the early 1970s, the economic outlook for the remainder of the 1980s does not look good. Most policymakers in the midwestern states would agree that their school finance systems are in need of "reform," but it does not seem likely that the necessary revenue will be available. The short-range revenue prospects for the public schools in the Midwest look bleak and the long-range prospects are very difficult to determine.

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